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DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 1986

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE

COMMITTEE ON APPROPRIATIONS

UNITED STATES SENATE

NINETY-NINTH CONGRESS

FIRST SESSION

ON

H.R. 3629

AN ACT MAKING APPROPRIATIONS FOR THE DEPARTMENT OF DEFENSE FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 1986, AND FOR OTHER PURPOSES

PART 3—(Pages 1-1060)

Army Modernization
Defense Manpower Requirements
E-6A Strategic Communications Aircraft
NATO Commitment
Navy Aircraft Procurement and Related R&D
Navy Shipbuilding and Overhaul Programs
Reserve Affairs
Weapons and Tactical Missile Procurement

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DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 1986

THURSDAY, MARCH 28, 1985

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10 a.m., in room SD-342, Dirksen Senate Office Building, Hon. Ted Stevens (chairman) presiding.

Present: Senators Stevens, McClure, Andrews, Rudman, Stennis, Kasten, Proxmire, and Sasser.

DEPARTMENT OF DEFENSE

ASSISTANT SECRETARY OF DEFENSE FOR RESERVE AFFAIRS

STATEMENT OF JAMES H. WEBB, ASSISTANT SECRETARY OF DEFENSE FOR RESERVE AFFAIRS

RESERVE AFFAIRS

SELECTED RESERVES BUDGET

Senator RUDMAN [presiding]. The subcommittee will come to order.

The subject of today's hearing is the fiscal year 1986 budget request for Selected Reserves. That portion of the request examined by this subcommittee is approximately $19.2 billion, including $9.1 billion for military pay, $6 billion for operations and support and $4 billion for equipment purchases.

The total represents a net decrease of $260 million from fiscal year 1985 funding. The largest portion of that decrease is $1.8 billion less for equipment purchases. Offsetting this are increases for $1.2 billion for military pay and $400 million for operations and maintenance.

The request would fund an increase of 47,000 reservists of which 19,600 are full-time active guardsmen and reservists. This increase comes when our Reserve force strength is at an historic peacetime high.

RESERVE READINESS

During the past years substantial progress has been made in improving the readiness of the Reserve components. Much of the impetus for more effectively using and improving the Reserve components has come from the Congress, by the Defense Department in most cases has been willing to act to improve our Reserve force capability.

Many in Congress believe still more could be done to increase our reliance on the Reserves and improve overall readiness. The committee will be very interested to hear the views of our many witnesses on this subject.

Our chairman, Senator Stevens will be along shortly, but he asked me to start the hearing this morning in order to save time for everyone involved.

INTRODUCTION OF WITNESSES

With that, let me welcome Mr. James Webb, Jr., the Assistant Secretary of Defense for Reserve Affairs, along with the chiefs and directors of the Reserve components.

Gentlemen, your printed statements will be included in the record. We would appreciate your summarizing your remarks.

OVERVIEW OF GUARD AND RESERVE FORCES

Mr. WEBB. Thank you, Mr. Chairman.

It is a pleasure for me to appear before this committee and present an overview of the National Guard and Reserve Forces of the United States.

However, I would first like to acknowledge the significant contribution that this subcommittee has made in its support of the Department's endeavor to strengthen and enhance the posture of our Reserve components. I believe at this point the Reserve components represent tremendously improved forces-in-being which are well on their way to being fully capable of responding when needed.

While I am most pleased with the progress that has been made since 1980, there is much more to be done in the areas of manning, equipping, and training to further develop and attain the capability required of our Reserve components.

PUBLIC UNDERSTANDING OF GUARD AND RESERVE ROLE

At my confirmation hearing I discussed the need for improved public understanding of the vital role of the National Guard and Reserve. We have begun a concerted effort to assist the components in communicating this important message to audiences including the active forces, Reserve component members and their families, public opinion leaders and the public in general.

Public support which can only come from public understanding is essential to morale, esprit de corps, and ultimately to readiness of our Reserve forces. Among the most important audiences we need to reach are the families of the National Guard and Reserve members.

Research has shown family attitudes exert major influence on the retention of military personnel. We plan to field a comprehensive survey of all Guard and Reserve components early in 1986. This is a mission of our office. Such a survey has never been done.

ACTIVITIES OF OFFICE OF RESERVE AFFAIRS

There has been a good deal of questioning about the functioning of this office which, as you know, Mr. Chairman, Congress created. I serve as a Principal Staff Assistant to the Secretary of Defense with specific responsibility for overall supervision of Reserve component matters.

We organized the office with a Principal Deputy Assistant Secretary of Defense and three other Deputy Assistant Secretaries. The latter deputy's functions are in the vital areas of manpower and personnel, readiness and training, and material and facilities.

In addition, we have created three directorates that report to me in the area of programs, plans and budget, analysis, and mobilization policy and plans. I believe we have created an organization with the minimum number of personnel commensurate with the Department-wide responsibilities of the new office.

Our staff includes military personnel from all seven Reserve components, including Coast Guard Reserve and all four regular military services. An indication of our capability to operate effectively throughout the Department can be measured to some extent by our participation on various boards, groups and communities within DOD.

A year ago we had memberships on five of these bodies. Today the number is 44. I have a number of areas outlined in my statement regarding personnel strength, IRR, National Guard and Reserve equipment, legislative initiatives, and international reserve affairs which we have become involved in.

I will be happy to answer any questions.

[The statement of Mr. Webb follows:]

STATEMENT OF JAMES H. WEBB

It is a pleasure for me to appear before this committee and present an overview of the National Guard and Reserve Forces of the United States. However, I would first like to acknowledge the significant contribution that this subcommittee has made in its support of the Department's endeavor to strengthen and enhance the posture of our reserve components. I believe at this point the reserve components represent tremendously improved forces-in-being which are well on their way to being fully capable of responding when needed. While I am most pleased with the progress that has been made since 1980, there is much more to be done in the areas of manning, equipping, and training to further develop and attain the capability required of our reserve components.

We have recognized that conditions dictate that the Guard and Reserve should accept a larger role in this country's day-to-day defense. Reserve component missions and force structure consequently are being modified to reflect this expanded role. The following discussion outlines the progress we have achieved, plans that are underway, and some of the remaining shortfalls.

Army National Guard and Army Reserve

In certain instances, as a result of the "first to fight, first to be equipped" policy of the Department, early deploying Army National Guard and Reserve units are receiving modern weapon systems based on deployment planning rather than component status. During FY 1984, more than $900 million worth of new equipment was issued to the Army reserve components. In FY 1985 more than $1.4 billion in new equipment is planned to be issued. This represents new equipment including the M-1 tank, UH-60 helicopter, Bradley Fighting Vehicle, M198 howitzer, and other modern support vehicles.

Modification of the AH-1G helicopters to the AH-1S will provide the reserve components with a modern attack helicopter. Helicopter attack capability will also be improved with the fielding of two AH-64 Apache helicopter companies in the National Guard during FY 1987. The AH-64 is the Army's first attack helicopter specifically developed for the day/night, adverse weather, anti-armor mission.

The missile armament posture of the Army National Guard will be significantly enhanced with the delivery of the TOW-2 missile system commencing in FY 1986. This latest improvement to the TOW missile system will give the weapon a greater and more diverse kill capability. It can be employed on the AH-1S attack helicopter, the Bradley Fighting Vehicle, the improved TOW Vehicle, and can be used by dismounted infantry.

Efforts are also ongoing to improve the air defense capability of the Army National Guard. The Army has completed a careful review of the Army National Guard Air Defense Artillery modernization. As instructed, the Army will phase out the U.S. ROLAND only after the majority of National Guard air defense battalions have completed modernization and the remainder have been scheduled to undergo modernization. The Army plans to have this accomplished by FY 1989. This plan will allow an expeditious but systematic modernization of the eight National Guard DUSTER Battalions, while maintaining total Army combat capability. This will require an equipment transfer from the active component to reserve component units and the acquisition of additional equipment. Accordingly, the Army plans to acquire 36 CHAPARRAL fire units with support equipment and missiles in FY 1987 for delivery in FY 1989. This has all been woven into the National Guard air defense modernization plan and should cause minimal disruption to ongoing modernization initiatives.

The number of Reserve roundout brigades filling Army divisions increased from four to five in FY 1983. The number of National Guard divisions increased from eight to nine during FY 1984, with a further increase to ten planned for FY 1986. The organization of the new Mechanized Division will continue during FY 1985 and a Light Infantry Division will be activated in FY 1986. Beginning in FY 1985 and continuing through FY 1986 the three National Guard heavy divisions will convert to the Division 86 design.

Increased National Guard and Reserve participation in field exercises has improved unit and individual readiness. For example, the number of Army Guard and Reserve units participating in training with overseas deployed forces increased from 117 in 1980 to 400 in 1984. Reserve component participation at the Army's National Training Center is being increased. In FY 1985 five reserve component battalions are programmed for training there. The National Training Center provides these units with the most rigorous combined arms training experience possible short of actual war, and provides live fire training, with opposing forces, under realistic scenarios. To further enhance Guard and Reserve field training, the Army has developed a program to provide the Multiple Integrated Laser Engagement System (MILES) equipment, a tactical engagement simulation system, to the reserve components at their normal maneuver sites.

Guard and Reserve maintenance personnel training on state of the art equipment still remains a major problem. Consequently, steps are being taken to provide hands-on training and instruction on modern force equipment. The Army is planning to establish Regional Maintenance Training Sites to improve the readiness of reserve component maintenance personnel through military occupational specialty, transition, and sustainment training programs.

Naval Reserve

Real progress has been made toward the modernization and integration of the Naval Reserve as a full-fledged partner in the Total Force. Implementation of Total Force and Horizontal Equipment Integration policies is now providing the Naval Reserve with equipment compatible with that of the active Navy. With these policy implementations, today's Naval Reserve is an essential component of our Navy and our national defense posture.

Modernization of the Naval Reserve Surface Force continues with the acquisition of two more FFG-7 Perry class frigates during FY 1985. With four additional FFG-7s to be transferred during FY 1986, the Naval Reserve Surface Force will have a total of six FF-1052 Knox class and nine FFG-7 Perry class frigates at the end of FY 1986. This puts us past the halfway point of attaining 26 modern ASW ships in the Naval Reserve Force before the end of the decade. The up-to-date SH-2F helicopter will be provided and employed onboard the frigates to round out their ASW capability.

Improvement of the Naval Reserve Surface Force will continue as the AO-177 class oiler enters the force. In addition, the Naval Reserve Force will receive eight of the new construction MCM-1, Mine Countermeasures Ships and all 17 of the new MSH-1, Minesweeper Hunter Ships.

The newly implemented Craft of Opportunity concept for an improved harbor clearance capability is well under way. Six Craft of Opportunity units will join the Naval Reserve Force during FY 1985. Six more units are programmed for FY 1986. This concept provides for utilizing ships received by the United States Government as a result of a variety of legal actions and converting them for use in harbor clearance at designated ports. Three repair ships will also enter the Naval Reserve Force in FY 1986, and two new Reserve Mobile Construction Battalions and a new Mobile Inshore Undersea Warfare Unit will be organized.

Modernization of Naval Reserve aviation is also in full swing. The F-14 fighter is being introduced to the Reserve Carrier Air Wings during FY 1985 and FY 1986. The Naval Reserve is also transitioning from the A-7B into the more modern A-7E attack aircraft. Naval Air Reserve squadrons have already begun training in the new F/A-18 aircraft, and actual assignment of the aircraft to these squadrons will commence in FY 1986. The Squadron Augmentation Unit concept initiated in FY 1984 has also been successful in enhancing the training of Reserve augmentation aircrews in the same A-6, F-14, P-3C and E-2C aircraft employed by their gaining squadrons. Expansion of this program is planned.

The Navy's only combat search and rescue squadron, a Reserve squadron, will be using and evaluating the two UH-60 helicopters authorized and funded by the Congress last year.

The TACNAVMOD upgrade for the P-3A and B maritime patrol aircraft will be completed in FY 1986, and upgrading of the AQA-7 acoustic processor on these aircraft will continue. These improvements will provide us with an effective near term reserve component maritime patrol force. However, many of these P-3A/B aircraft will soon be reaching the end of their normal service life, and will require expensive service life extension programs (SLEP's). Concurrently the Soviet submarine force is undergoing extensive modernization, and our active patrol aircraft force is transitioning to the state of the art P-3C. Consequently, to maintain the capability of our Reserve force in the future, as well as providing active and reserve compatability, future reserve component transitions to the P-3C aircraft must be anticipated. This is especially important, since the Naval Reserve provides one-third of the Navy's total maritime patrol capability. As a preliminary step toward the future transition of the Naval Reserve into the P-3C aircraft and to assure fully qualified aircrew augmentation for active squadrons, the first of three Master Augmentation Units has been established. These units allow Reserve aircrews to receive hands-on training with the P-3C.

During FY 1985 the last of the C-118 aircraft will be retired and the final increment of the used DC-9s will be procured for the Reserve Transport squadrons. This endeavor represents a major milestone toward improving the training readiness of the Naval Reserve.

Marine Corps Reserve

The Marine Corps Reserve has changed its character in recent years. Once viewed primarily as a source of pretrained manpower for active unit integration, the Selected Marine Corps Reserve today trains as highly effective combat units. Today, Marine Corps reserve units are committed to active force commands in contingency planning. In concert with the "first to fight, first to be equipped" policy, the Marine Corps Reserve will receive the major new ground equipment and weapon systems being introduced into the Marine Corps inventory.

The Marine Corps Reserve has made great strides in its mobilization capability so that trained units and individuals can be rapidly assimilated into a total mobilization effort.

To keep the Marine Corps Reserve adaptable to changing mobilization requirements, numerous structural changes are occurring. These include activation of the final portion of the 4th Medical and Dental battalions, a light armored vehicle (LAV) battalion, a Target Acquisition Battery, and the reorganization of infantry and direct support artillery battalions. To take advantage of the extensive Alaskan arctic training environment, the first Selected Marine Corps Reserve unit will be activated in Anchorage in FY 1985.

Modernization of the Marine Corps Reserve aviation wing is proceeding according to plan. The F-4 squadrons are presently transitioning to the more modern F-4S fighter, and a third F-4 squadron was activated during FY 1984. New KC-130T tanker aircraft have been provided to the Marine Corps Reserve and plans are being made to establish an additional KC-130 squadron in FY 1986. Although progress has been made in aviation modernization, the Marine Corps Reserve aircraft are aging, and there are still shortages in attack helicopters and aerial tankers. Marine long term acquisition plans are addressing the shortages, and further modernization transitions are planned, following the active force upgrade to F/A-18 and AH-1T aircraft.

Combat training for the Marine Corps Reserve has taken a new course which no longer focuses on the unit home centers. During FY 1984, Marine reservists trained in exercises around the world, which continued and increased their training integration with the active force during major exercises. The first brigade size landing since the Korean War was conducted with a Marine Reserve unit during FY 1984.

Air National Guard and Air Force Reserve

As with the other service reserve components, the combat capability of the Air Reserve Forces -- consisting of the Air National Guard and the Air Force Reserve -- continues to improve. By augmenting the Active Air force in the performance of their missions, we are making significant contributions to National Security and to total force readiness. The commitment for continued upgrading, modernization, and expansion of the Air Reserve Forces is strong.

The Air National Guard and the Air Force Reserve provide 34 percent of the Air Force tactical fighter capability and are currently acquiring the highly capable F-16 fighter aircraft and the upgraded F-4E. In FY 1986 the F-15 air superiority fighter will enter the Air National Guard inventory. The Air Reserve Forces are also acquiring the C-5 and C-141 strategic airlift aircraft, as well as new C-130H tactical airlift aircraft. The transfer of strategic airlift aircraft to the reserve components began during FY 1985 with the formation of one C-5A squadron in both the Air National Guard and the Air Force Reserve. To enhance the airlift capability two C-141B squadrons will be established during FY 1986. Additional C-5A and C-141 aircraft will be transferred to the reserve components as the active force acquires the C-5B and C-17 aircraft, and long-range plans call for the assignment of the C-17 to the Air Reserve Forces early in the next decade.

An aggressive modification program for existing Air Reserve Force aircraft is also ongoing. Enhancements in this area include equipping the F-4 aircraft with advanced AIM-9L air-to-air missile capabilities, low smoke engines, and improved radar warning receivers.

In an effort to provide meaningful and realistic training the Air Reserve Forces' participation in RED FLAG, overseas, and joint exercises has increased by 30 percent since 1980.

Coast Guard Reserve

Although the Coast Guard Reserve is not a part of the Department of Defense in peacetime, the Coast Guard Reserve is a vital element of the Reserve forces. Thus, I would like to make a few comments in regard to that force.

The Coast Guard Selected Reserve strength increased to 12,300 personnel in FY 1984. Continued growth is projected during FY 1985 to attain the average strength authorization, of not less than 12,500.

Like the other reserve components, the Coast Guard Reserve is emphasizing mobilization readiness through integration with the active forces in exercise environments. The Coast Guard Reserve has participated with both active and reserve forces of the Army, Navy, and Marine Corps in a number of interservice exercises. Coast Guard reservists also enhanced their mobilization readiness training through the augmentation of the active Coast Guard peacetime missions, having dedicated over 1.5 million Reserve manhours in FY 1984. Total force readiness exercises, interservice exercises, and active component mission integration will continue to play a valid and major role in mobilization readiness training. Particular emphasis will be placed on training Reserve small boat crews and forces that mobilize to Coast Guard Cutters.

Manning/Equipping/Training the Reserve Forces

Effective fighting forces depend on adequate manning, modern equipment, and proper training. The requirements apply equally to the active and reserve components. Sense of pride and unit identity also play a large part in ultimate capability of a unit. Thus, it is essential that sufficient funding be made available to man, equip, and train the Guard and Reserve forces to insure that they can be integrated into the total military structure as fully functional units or as trained individuals, and as equal partners. I ask your support for the Guard and Reserve programs we have presented to you in the FY 1986 Budget, so that we can continue our progress.

The next portion of my statement will deal with specific estimates related to the National Guard and Reserve in the FY 1986 Budget Request.

Appropriation Summary

Table 1 depicts the Total Obligational Authority (TOA) by

reserve component.

Table 1
TOA, $ in Millions

	FY 1984 Actual	FY 1985 Estimate	FY 1986 Estimate
ARMY			
Military Personnel:	3,343.5	5,232.9	6.054.2
Reserve Personnel, Army	1,322.0	2,091.0	2,394.4
National Guard Personnel, Army	1,847.9	2,908.7	3,430.8
Active Component	173.5	233.2	229.0
Operation and Maintenance:	1,868.8	2,172.0	2,384.8
O&M Army Reserve	691.6	732.7	779.6
O&M Army National Guard	1,177.2	1,439.3	1,605.2
Military Construction:	122.3	167.9	172.8
Mil. Con. Army Reserve	54.7	69.3	70.7
Mil. Con. Army National Guard	67.6	98.6	102.1
Procurement:	1,639.3	2,780.4	2,452.3
Total Army	6,973.9	10,353.2	11,064.1

	FY 1984 Actual	FY 1985 Estimate	FY 1986 Estimate
NAVY			
Military Personnel:	896.8	1,336.7	1,533.0
Reserve Personnel, Navy	757.6	1,156.1	1,353.6
Active Component	139.2	180.6	179.4
Operation and Maintenance:	623.8	828.8	954.5
O&M Navy Reserve	623.8	828.8	954.5
Military Construction:	18.8	50.3	41.8
Mil. Con. Navy Reserve	18.8	50.3	41.8
Procurement:	289.4	575.8	356.6
Total Navy	1,828.8	2,791.6	2,885.9
MARINE CORPS			
Military Personnel:	259.9	387.6	413.5
Reserve Personnel, Marine Corps	177.2	271.8	290.0
Active Component	87.7	115.8	123.7
Operation and Maintenance:	52.1	58.8	61.6
O&M Marine Corps Reserve	52.1	58.8	61.6
Military Construction:	11.8	10.5	10.0
Mil. Con. Navy Reserve	11.8	10.5	10.0
Procurement: (included in Navy)	-	-	-
Total Marine Corps	323.8	456.9	485.1
AIR FORCE			
Military Personnel:	998.3	1,522.1	1,664.0
Reserve Personnel, Air Force	387.7	582.9	622.5
National Guard Pers., Air Force	577.9	892.3	995.1
Active Component	32.7	46.9	46.4
Operation and Maintenance:	2,583.7	2,710.1	2,737.8
O&M Air Force Reserve	783.0	881.3	907.7
O&M Air National Guard	1,800.7	1,828.8	1,830.1
Military Construction:	150.1	179.0	204.0
Mil. Con. Air Force Reserve	41.2	67.8	66.8
Mil. Con. Air National Guard	108.9	111.2	137.2
Procurement:	1,266.4	2,097.3	1,211.7
Total Air Force	4,998.5	6,508.5	5,817.5
OTHER			
Guard and Reserve Procurement:	176.0	380.0	-
Total Other	176.0	380.0	-
TOTAL DOD			
Military Personnel:	5,498.5	8,479.3	9,664.7
Reserve Personnel	2,639.5	4,101.8	4,660.5
National Guard Personnel	2,425.8	3,801.0	4,425.9
Active Component	433.1	576.5	578.3

	FY 1984 Actual	FY 1985 Estimate	FY 1986 Estimate
Operation and Maintenance:	5,128.4	5,769.7	6,138.7
O&M Reserve	2,150.5	2,501.6	2,703.4
O&M National Guard	2,977.9	3,268.1	3,435.3
Military Construction:	303.0	407.7	428.6
Mil. Con. Reserve	126.5	197.9	189.3
Mil. Con. National Guard	176.5	209.8	239.3
Procurement:	3,371.1	5,833.5	4,020.6
Total DoD	14,301.0	20,490.1	20,252.6

Note: Detail may not add due to rounding.

Military Personnel

The military personnel accounts increase by $1.2 billion in FY 1986 primarily for:

o Pay Raise. Annualization costs of the January 1, 1985 and the July 1, 1985 pay raise are estimated to be $83 million and $160 million, respectively.

o Paid Drill Strength. Costs for paid drill strength increase by approximately $185 million. The additional costs are attributed to an increase in paid drill strength of 23,000, and increases for travel, subsistence, and inflation. This increase will enhance mobilization readiness, and is in recognition of the increased role of the National Guard and Reserve components.

o Basic Training. An increase in paid drill strength requires new accessions. They will complete initial active duty for training at an estimated cost of $73 million.

o Full-Time Strength. Cost for this program increase by approximately $440 million. End strengths increase by 19,600. One of the most important factors influencing readiness is the number of full-time personnel available to provide day-to-day management, administration, training, equipment maintenance, and similar essential tasks.

o School and Special Training. This type of training provides for pay, allowances, and travel for short tours of active duty. Types of tours include unit conversion training, pilot training, career development, exercises, conferences, management support, etc. The increased cost for this training in FY 1986 is estimated to cost approximately $85 million.

o Educational Benefits (G.I. Bill). Funds are for the payment to the new Department of Defense Education Benefits Fund. This program will fund educational benefit payments for eligible individuals in the Selected Reserve. The increased cost in FY 1986 is approximately $78 million.

o Other Pays and Allowances. Increased costs for clothing, subsistence-in-kind, travel, bonuses, and other miscellaneous costs are estimated at about $100 million.

Operation and Maintenance

The operation and maintenance (O&M) accounts have a net increase of $400 million in FY 1986 primarily for:

o Price Changes. Price changes result in a net reduction of $78 million. Included in this reduction is the FY 1986 5% civilian pay cut (-$84 million), downward fluctuations in stock fund and industrial fund rates (-$57 million), annualization of the January 1, 1985 civilian pay raise (+$20 million), and inflation on purchases (+$43 million).

o Program Changes. Program changes result in a net increase of $464 million. Included are increases for recruiting and advertising support (+$35 million), support funding for full-time unit personnel (+$7 million), civilian workyears (+$14 million), support for the Continental Army Management Information System (CAMIS)(+$15 million), logistical support (including flying hour programs)(+$81 million), and organizational clothing and equipment increases in support of increased strength levels as well as enhanced clothing requirements (+$97 million). Also included are changes to the real property maintenance and base operations programs (+$11 million), ship maintenance programs (+$17 million), and aircraft rework programs (+$8 million).

o Appropriation Transfers. A proposed change to the criteria governing investments and expenditures resulted in a transfer of $29 million into all reserve component O&M appropriations. The Naval Reserve also transferred an additional $57 million into its O&M account from the Operation and Maintenance, Navy (O&M,N) and the Aircraft Procurement, Navy (APN) appropriations in order to move the purchases of Aviation Depot Level Repairables (AVDLR's) to the reserve component account. This transfer is intended to increase readiness through improved supply support.

Military Construction

Guard and Reserve facilities represent a large capital investment. We have approximately 6,400 installations and training sites. Our FY 1986 military construction request is $428.6 million--a modest growth of approximately $20 million over the FY 1985 level.

My philosophy regarding military construction programs and their management is that our investment in military construction should be determined by mission associated requirements, to include equipment storage, and our ability to execute our programs in an efficient and timely manner. To this end, my staff participates in the planning, programming and budgeting of military construction. We do not direct the Services as to what, where, and when to build. That is their decision. We will carefully review these decisions, and will support prudently justified projects requested by the Services which will improve mission accomplishment and permit realistic training that will result in a higher state of readiness.

A major concern in the existing facilities program is the quantity of identified backlogs for both construction and repair. Current service estimates indicate that reserve component construction backlogs exceed $3 billion. We intend to improve backlog validation procedures and then develop plans for containment and systematic reduction of this backlog.

Procurement (National Guard and Reserve Equipment)

Modernizing and equipping the Guard and Reserve forces to facilitate their expanded role in the Total Force, are the greatest challenges facing us today.

Previous concepts and policies relative to overall military capability were based on the theory that the active component alone must carry the initial responsibility for wartime operations. As a result, the reserve components were recipients of older equipment and were given low budget priority as the active components tried to keep pace with an increasing global threat in a fiscally constrained environment. With the advent of the Total Force policy in the 1970's, the situation began to change. The policy adopted by this administration to give equipment priority to those units that will be "first to fight" whether Active, Guard, or Reserve has furthered this trend and is resulting in significant increases in modern equipment for the reserve forces.

The most difficult aspect of this evolution has been to assess fully the total Reserve equipment deficiencies. We have just forwarded the FY 1986 Report on National Guard and Reserve Equipment to Congress, as required by Public Law 97-86 (the DoD Authorization Act, 1982). This was the fourth such report submitted on selected items of equipment, with each successive report reflecting improved identification and display of total equipment requirements, availability, shortfalls, and corrective distribution plans. The data tables in this report are now fully automated, and will continue to improve with more complete and accurate service assessments. Our report three years ago reflected no M-1 tanks for the Army Guard before 1986, no M60A3 tanks for the Army Reserve, no F-14 and F/A-18 aircraft for the Naval Reserve, no M198 howitzers for the Marine Corps Reserve, and no C5-A aircraft for the Air Reserves. As of FY 1985, the Army Guard already has 63 M-1 tanks and distribution during this year will bring the total to 243; one Army Reserve training division has received the first increment of the M60A3 tank with the Tank Thermal Sight Mod; the Naval Reserve has 20 F-14 fighter aircraft and is training in fleet F/A-18's prior to their receipt of their first 12 next year; the Marine Corps Reserve is getting its first M198 howitzers this year; and both the Air National Guard and Air Force Reserve are receiving C-5A's. These are but a few examples of the progress made by the Services in equipping and modernizing their reserve components.

We have also recently submitted the P-1R, which reflects the types, quantities and cost of all equipment items which have been proposed for FY 1986 procurement for the Guard and Reserve components. This report was not possible three years ago, as all Reserve equipment procurement was not separately identified within the total force budget planning. This report indicates a total of over $4 billion in FY 1986 procurement dedicated to Guard and Reserve Forces:

- o The Department of the Army has submitted budget requirements of over $1.8 billion for the Army National Guard and over $641 million for the Army Reserve, totaling nearly $2.5 billion. This budget request includes: UH-60A helicopters, communications equipment, night vision devices, NBC equipment, Bridge equipment, and assorted vehicles, weapons and ammunition for both the Guard and the Reserve. It also includes 1200 Stinger Missiles, 117 Bradley Fighting Vehicles, and 60 M-1 tanks for the Guard.

- o The Department of the Air Force has submitted budget proposals of $868 million for the Air National Guard and over $343 million for the Air Force Reserve, totaling over $1.2 billion. This funding will procure weapons, ammunition, vehicles of various types, and continued aircraft modifications for both the Air National Guard and Air Force Reserve.

- o The Department of the Navy has identified over $356 million dedicated for Navy and Marine Corps procurement. This includes aircraft and electromagnetic countermeasures equipment mods, aviation ground support equipment and assorted vehicles for both the Navy and Marines, equipment for Naval Reserve Intermediate Maintenance Activities, Mobile Diving and Salvage units, Explosive Ordnance Disposal teams and Special Warfare units, and various weapons and ammunition for the Marine Reserves, including 35 M-198 Howitzers.

I want to emphasize, however, that this is not the total requirement, and our Guard and Reserve forces will not be "well" by 1988 (reference: FY 1986 National Guard and Reserve Equipment Report). Even if all service procurement and redistribution plans are achieved, which has never been accomplished in budgetary history, many shortages will still exist.

By the end of FY 1988 the Army National Guard will still lack over two-thirds of their required Infantry and Cavalry Fighting Vehicles and improved TOW vehicles; the Army Reserve will lack over 40% of its 10-ton trucks and 90% of its combat engineer vehicles; the Naval Reserve patrol force will consist of P-3A and B aircraft averaging about 20 years old, which have been updated but will still lack capability relative to active component's P-3C's and the Soviet submarine threat through the 90's; the Marine Corps Reserve will still lack one-third of its required transport aircraft (KC-130's), with 40% of those on hand being the 21 year old F models; two-thirds of Air National Guard tactical airlift will be 25 years old; and nearly all of the Air Force Reserve tactical airlift fleet will be at the 20 plus year old mark.

These, again, are but a few examples of the equipment items studied to date. As we progress up the learning curve of our assessment and planning process, the list will be both expanded and refined. I am confident that the data produced thus far is accurate and the requirements are valid. The individual service planning relative to Guard and Reserve equipment procurement, as reflected in the DoD proposed budget, provides positive progress within budgetary constraints and total force priorities.

I must emphasize once again, that much remains to be done. We are on track and progressing well, with increasing momentum. I assure you that this particular effort is one of my top priorities.

Selected Reserve Personnel Strength

Between FY 1980 and FY 1984 Selected Reserve end strength levels increased by over 20 percent. The FY 1984 end strength of 1,045,828 surpassed the previous peacetime high of 1,006,600 attained in FY 1959. A further strength increase of 78,300 is projected between FY 1984 and the end of FY 1986. More than 47,000 of this increase is programmed for FY 1986. This increase reflects the demands of new and includes an expanded missions assigned to the reserve components and expansion of our full-time support capabilities.

Table 2 depicts the Selected Reserve strength profile by reserve component.

Table 2
Selected Reserve End Strength
(Thousands)

	FY 1980* Actual	FY 1984 Actual	FY 1985 Estimate	FY 1986 Estimate
Army National Guard	366.6	434.3	438.4	450.5
Army Reserve	213.2	275.1	285.6	300.5

	FY 1980* Actual	FY 1984 Actual	FY 1985 Estimate	FY 1986 Estimate
Naval Reserve	97.1	120.6	128.7	141.8
Marine Corps Reserve	35.6	40.6	41.8	43.0
Air National Guard	96.3	105.0	107.7	110.9
Air Force Reserve	59.8	70.3	74.8	77.4
DoD Total	868.6	1,045.8	1,077.0	1,124.1

* For consistency, FY 1980 strengths have been adjusted to include Navy Training and Administration of Reserves (TARs) and Category "D" Individual Mobilization Augmentees (IMAs).

Over the same four-year period of FY 1980-FY 1984, the quality of Reserve enlistees, in terms of the proportion that are high school graduates, increased significantly, as depicted in table 3, rising from 76 percent in FY 1980 to 85 percent in FY 1984.

Table 3
Selected Reserve Enlistments - All Sources
(Percent High School Graduates)

Component	FY 1980	FY 1981	FY 1982	FY 1983	FY 1984
ARNG	79	79	81	78	81
USAR	64	74	80	81	82
USNR	77	80	80	84	88
USMCR	49	74	89	92	92
ANG	99	99	99	99	99
USAFR	95	97	98	99	99
Total	76	80	83	83	85

As the National Guard and Reserve have experienced a rather high growth rate in order to meet the new and increasing demands placed upon them, the rate of increase for the active force has been, by design, significantly less. This change in rate of growth presents some new challenges for the reserve components. Since a major manpower source for the reserve components is the flow of manpower leaving the active force, the dynamics of this manpower flow are of special concern to the reserve components. The number of people leaving the active force overall is now declining due to a relatively constant active force size and higher retention rates. This, coupled with the declining number of 18-24 year olds in the total population, places increased demands on reserve component retention and recruiting efforts.

Our goal this year will be to continue and improve those inducements that have been such a key ingredient to the increased vitality of the reserve components. The recently enacted GI Bill for the Selected Reserve, which will take effect in July 1985, will be used to complement our current incentives and, with the adoption of several technical modifications, will enable us to maximize the effectiveness of all these strength management tools. In this regard, we are requesting $94.5 million to fund the Selected Reserve portion of the new GI Bill, and we will forward legislation to extend the current cash bonus authority five years to 1990.

In addition, we are completing our review of other incentive proposals that are intended to support quality, distribution, and retention goals in the Selected Reserve. The current authority, which expires at the end of FY 1985 for the various Selected Reserve and IRR cash enlistment and retention incentives, has been helpful in building our strength levels and retaining critical skills. These authorities need to be extended for the foreseeable future. We are examining the effectiveness of these incentives to determine their relative success and to be able to better understand the anticipated positive impact of the new GI Bill. Based on our review, adjustments may be necessary to insure a complete package of incentives to deal with individual recruiting and retention problems. We are considering possible legislative proposals which include raising the enlistment and reenlistment cash bonus ceilings, a new prior service bonus to attract veterans with critical skills, a special drill pay for seagoing Naval Reserve members, and extension of the student loan repayment authority to the lower three officer and warrant grades to attract certain technical and professional skills.

Full-Time Support Personnel

Full-time support personnel assigned to the reserve components perform the day-to-day management, administration, training, equipment maintenance, and similar essential tasks. These personnel include Active Guard and Reserve (AGR) members (who are counted as part of the Selected Reserve), the military technicians (whose "full-time" contribution is civilian, but who would mobilize with the supported reserve component unit as a Selected Reservist), the active force members (who provide full-time support but are counted as a part of active force end strength), and the Department of Defense civilians (who provide a full-time support role in a strictly civilian capacity and would not mobilize with the unit).

Overall, full-time support personnel numbers must increase as the reserve components expand in size. It is important, however, that one does not attempt to make a linear relationship between growth of the Selected Reserve and the full-time support. The actual number required must be derived from a detailed analysis of requirements to support specific units and missions.

The AGR growth from FY 1980 through FY 1984 has been approximately 23,000 personnel. An additional growth of 8,800 is projected for FY 1985 and 19,600 for FY 1986. We are also requesting growth in the military technician program. Table 4 depicts the current plan for both the AGR and the military technician programs.

Table 4
Full-Time Support (End Strengths)
ACTIVE GUARD AND RESERVE (AGR)

	FY 1984 Actual	FY 1985 Estimate	FY 1986 Estimate
Army National Guard	16,656	20,583	30,679
Army Reserve	8,822	10,700	14,714
Naval Reserve	13,327	15,210	19,510
Marine Corps Reserve	803	1,129	1,475
Air National Guard	5,773	6,469	7,269
Air Force Reserve	489	603	635
Total DoD	45,870	54,694	74,282

MILITARY TECHNICIANS

	FY 1984 Actual	FY 1985 Estimate	FY 1986 Estimate
Army National Guard	24,589	24,119	24,129
Army Reserve	6,973	7,585	7,623
Air National Guard	22,160	22,401	22,792
Air Force Reserve	7,973	8,305	9,042
Total DoD	61,695	62,410	63,586

While these increases vary among the reserve components, they are essential to the effective management and training of the National Guard and Reserve forces. Changing missions and conversion to or acquisition of more technologically complex equipment necessitate the employment of an adequate percentage of full-time support personnel. Day-to-day peacetime missions cannot be fully accommodated and high technology aircraft, ships, tanks, and other sophisticated weapons cannot be maintained without the stability, continuity and expertise provided by full-time support personnel. Thus, as our missions and equipment become more complex, our ratio of full-time support personnel will necessarily increase.

Individual Ready Reserve

A major challenge facing us is the provision of sufficient numbers of pretrained individuals in addition to the Selected Reserve to fill out active and reserve component units and replace early casualties in a mobilization. We have taken several steps -- some new and some follow-ups on earlier initiatives -- to meet this challenge.

The IRR is increasing in size as a result of improved management and new incentive programs. The Army IRR has grown from a low of 149,427 in FY 1977 to the September 1984 level of 276,651.

On June 1, 1984, the eight year military service obligation was implemented as a method of reducing aggregate shortfalls in the IRR. It is projected that this will add 150,000 members to the pretrained manpower assets of the total IRR by 1990. The implementation of the IRR reenlistment bonus in FY 1984 for the purpose of reducing specific shortages in combat and other critical skills resulted in more than 2,000 IRR reenlistments in the Army alone. In accordance with congressional guidance, the bonus is now being paid in equal annual installments to help ensure the ready availability of all who receive the bonus. The Naval and Air Force Reserve have recently implemented this bonus program and the Marine Corps Reserve plans to implement it this year. We believe that this is an effective low-cost program to help our tough manning situation and, accordingly, we are requesting a five-year extension of the authority to 1990. We also have requested $4.1 million in FY 1986 to provide for new payments for the IRR reenlistment bonus.

Concern has been voiced in the past in regard to skill maintenance. We are deeply involved in the development of skill maintenance programs now. This budget request reflects a substantial growth in resources to conduct appropriate training for IRR members to ensure that their skill proficiency does not degrade to an unacceptable level.

Locating members of the IRR is another problem area. We began a new initiative in FY 1984 to conduct a data-base file matching with other Federal agencies to reduce the number of non-locatables in the Army Reserve. We plan to expand this file matching project to other reserve components and to implement standardized procedures to complete matching projects on a routine basis to improve and maintain IRR member locatability.

In addition to several other initiatives to improve IRR locatability we are considering an annual muster of part or all of the IRR, similar to that which is required of the Inactive National Guard (ING). This concept would not require legislation. Ultimately, the problem of IRR locatability could be substantially eliminated either by allowing access to IRS address files of those members who refuse to report their locations or to establish certain penalties in law for delinquent members.

Table 5 depicts the Individual Ready Reserve strength profile by reserve component.

Table 5
IRR STRENGTH
(In Thousands)

Component	FY 1984 Actual	FY 1985 Estimate	FY 1986 Estimate
ARNG (ING)	9,480	9,300	9,300
USAR	276,651	289,900	295,400
USNR	69,173	68,300	76,100
USMCR	48,429	50,000	52,000
USAFR	40,991	40,600	39,600
TOTAL	444,724	458,100	472,400

Legislative Proposals

In the coming months, my staff will be considering legislative proposals that address a number of manpower issues. Because of their importance to the overall reserve forces program, I would like to briefly discuss several of them now. The first concerns the use of the Uniform Code of Military Justice, or UCMJ, by our reserve components.

In view of the recent decision by the Court of Military Appeals in the case of U.S. vs. Caputo, (18 M.J. 259 [CMA] 1984), we are preparing a legislative proposal to clarify the intent of Congress concerning application of the UCMJ to the reserve components. We believe it is essential that the reserve components, which must be available for immediate mobilization, are subject to the same disciplinary standards as the active forces.

A second issue of concern is our system for managing reserve officer personnel. A comprehensive system of law providing the basis for the appointment and career management of reserve officers was first enacted in 1954. Only piecemeal adjustments to that legislation have been made during the ensuing 30 years. Over the past three years, the Reserve Affairs office directed the Department of Defense effort to produce a comprehensive Reserve Officer Personnel Management Act (ROPMA), designed to provide compatible personnel systems for all officers, whether on the active duty list, the reserve active duty list or the reserve active status list. This three year effort was the culmination of a long process, with major study efforts conducted as early as the 1970's. But these early efforts had little realistic chance of

changing the law since ROPMA was viewed by Congress as a follow-on to the Defense Officer Personnel Management Act (DOPMA). DOPMA was finally enacted in December 1980 and ROPMA is closely patterned after the Act. Our review includes the laws which govern the appointment, promotion, separation and transfer to the Retired Reserve of reserve commissioned officers of the Army, Navy, Marine Corps and Air Force. Our goal is to provide a system for long-range planning essential to providing reserve officers with attractive and meaningful careers and help attract and retain officers of the proper age and grade, who possess the skills and experience the reserve components need.

Based on the above, we are considering legislative changes which incorporate Service comments and the actions of the second session of the 98th Congress.

I am also concerned about the adequacy of the current statutes regarding health and disability coverage for Guard and Reserve members. Benefits and entitlements for reservists vary by the type of orders, duty status and the period of time the member is ordered to active duty. The reservist who is disabled or dies as a result of performing weekend drills or serving on orders specifying a period of 30 days or less, may not have the same benefits as his active duty counterpart, even under the same duty conditions.

This issue has received some attention by all the Services in light of increased reliance on the reserve components in the Total Force and the recent participation of reservists in hostile fire operations in Grenada and Lebanon. Benefits and entitlements are specific by public law. Recent actions of the Congress have made progress in this area and we are considering the desirability of like to briefly discuss several of them now. The first concerns the use of the Uniform Code of Military Justice, or UCMJ, by our reserve components.

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The final manpower issue I would like to discuss today concerns the medical readiness of our force. The ability to respond quickly to a wartime casualty flow is one of the most serious concerns within the Department of Defense, and has been the subject of much effort by the Assistant Secretary of Defense for Health Affairs. Our office has joined with Health Affairs in seeking ways to guarantee wartime medical readiness.

We are addressing estimates regarding the total required medical resources and are analyzing the reserve components' ability to provide the appropriate numbers of highly trained medical professionals (doctors, nurses and technicians). It is estimated that more than 50 percent of all the personnel required to provide wartime medical care will come from the reserve components.

This is a top priority. Members of our staff serve on the Wartime Medical Capabilities Study Steering and Working Group. Our Deputy Assistant Secretary of Defense for Guard and Reserve Manpower and Personnel is the co-chairman of the Reserve Components Medical Council. We are working closely with the ASD(HA) to establish definitive wartime requirements for medical personnel, equipment, and evacuation needs under several different war scenarios. The results of these internal DoD studies will be integrated in the summer of 1985 with results of the congressionally directed blue ribbon medical resources study. We will then know more precisely how many guardsmen and reservists, by skill, must be available for wartime needs and should be presently assigned to actual medical units, and how many we can draw from the IRR, Standby and Retired Reserve.

We are placing the very highest priority on improving our understanding of the wartime medical personnel issue, and following up that understanding with actions in collaboration with Health Affairs and the reserve components, in order to ensure that the needed medical personnel are available, and can be mobilized, deployed and employed when needed.

Evaluation of Reserve Component Combat Readiness

One item that became readily apparent to me after I took office last year was the need to determine shortfalls and impediments to National Guard and Reserve readiness. We are building a data base as a foundation for making such determinations by collecting information on the mobilization missions of National

Guard and Reserve units, deployment requirements, and the time sensitive nature of these missions. We are increasing our ability to analyze the data in the Unit Status and Identity Report System. Grouping such data permits us to monitor improvements or slippages in readiness and to develop corrective and/or enhanced support actions.

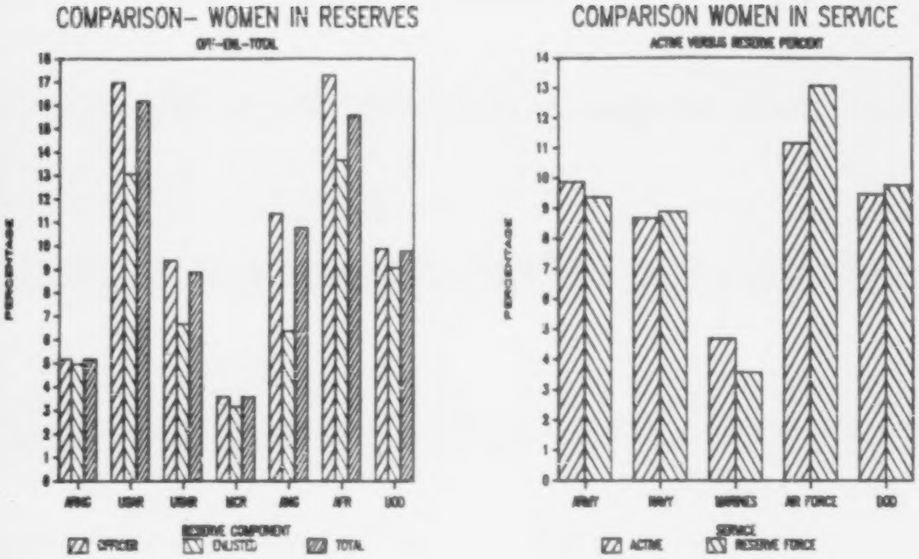
On the training aspect of readiness I must agree with the findings of the Defense Science Board that National Guard and Reserve Training requirements are unique and not well met. In their 1982 Summer Study, the Board recommended that tailored training support material be delivered to the reserve components. Time compression, lack of readily available range and maneuver areas, and geographical dispersion intensify the need for training devices and simulators in the reserve components. My goal in the application of training technology is to bring about an understanding of these unique reserve component training needs within the government, the military, and the industrial training simulation development communities to ensure that the needs of the Guard and Reserve are met. To achieve this end I am using my membership on the Department of Defense Steering Committee on Training and Training Technology to fully support research, development and procurement of training technology that will provide effective state-of-the-art training for each of our reserve components in their training environments.

In the interim, we are taking full advantage of training devices which are currently available. Examples include the Multiple Integrated Laser Engagement Systems (MILES), a laser transmitter which simulates live ammunition firing, and the Conduct of Fire Trainer (COFT), a tank commander and gunner trainer. In FY 1984 and FY 1985, $32.8 million was programmed to provide 55 company sets of MILES to 30 major reserve component training areas. In FY 1986, an additional $17.3 million is programmed and a requirement for about $138 million is projected for the future. This, ultimately, will equip every maneuver battalion with a platoon set of MILES. For the COFT, $13.5 million was programmed for FY 1984 and FY 1985 and $11.3 million for FY 1986, which will provide a total of 12 trainers. The total number of tank trainers eventually procured for the reserve components will depend upon the outcome of technologies in development today.

Women in the National Guard and Reserve

I believe that previous concerns make a comment regarding the use of women in the National Guard and Reserve appropriate. As in the active forces, women will continue to comprise a significant part of our reserve force and accessions. The policies governing the utilization of women in the reserve components mirror those of the parent Service and it is, therefore, not surprising that the percentage of women in the reserve components corresponds closely to that in the active forces. This is clearly shown in the figures in Table 6 below.

Table 6



COMPARISON- WOMEN IN RESERVES

OFF-ENL-TOTAL

COMPARISON WOMEN IN SERVICE

ACTIVE VERSUS RESERVE PERCENT

The Department policy of full utilization of women in the military is a Total Force policy, and I am committed to ensuring that women are given full opportunity to participate, contribute, and advance in accordance with that policy. To this end we are taking a comprehensive look at women in the Guard and Reserve--studying promotion opportunities, pay-grade distributions, occupational distributions, minority group representation, and accession plans.

Compensation Related Benefits (Commissary Test)

During 1984, the Department conducted the Selected Reserve Commissary Test directed by the Congress. This test involved over 100,000 Guard and Reserve personnel and 22 commissaries. The concept of the test was to permit Selected Reserve members to use the commissary up to a maximum of 14 days at their convenience throughout the year instead of only during periods of active duty for training. The analysis of the test data is being completed in order to make recommendations to the Congressional oversight committees.

Public and Family Support

At my confirmation hearing I discussed the need for improved public understanding of the vital role of the National Guard and Reserve. We have begun a concerted effort to assist the components in communicating this important message to audiences including the active force, the reserve component members and their families, public opinion leaders and the public in general. To assist in that effort, I am accepting as many speaking invitations and interview requests as possible. Public support, which can only come from public understanding, is essential to morale, esprit de corps and ultimately to readiness of our reserve forces.

Among the most important audiences we need to reach are the families of National Guard and Reserve members. Research has shown that family attitudes exert a major influence on the retention of military personnel. This is at least as true in the reserve components as in the active force. We need much more information on the demographics of reserve component members and their families, and we have initiated a program to develop this information as a basis for future policy changes to enhance recruitment and retention and to control attrition.

We plan to field a comprehensive survey of all Guard and Reserve components in early 1986. Such a survey has never been done and it will provide vital information for a wide range of reserve programs and concerns. With respect to families, it will provide sound information for structuring benefits and programs that will enhance family support and understanding and hence, retention. It will provide sound data on the number of our members who are married to other reservists or to active duty members and on the number of such cases where dependent children are involved. It will also give us needed planning data to ensure we can provide necessary support for Guard and Reserve families upon mobilization.

International Reserve Affairs

As I mentioned earlier, National Guard and Reserve participation in realistic training exercises is increasing. This includes a steadily increasing participation rate in overseas exercises. For example, this year 21.5% of the units participating in REFORGER 85 were National Guard and Reserve units from 38 states. Next year more than 40% of the units participating in REFORGER will be National Guard and Reserve units. For this reason, my office has been working very hard, quite often on a bilateral basis, to build solid relationships with our allies, particularly in NATO, but also in Asia.

Since September 1984, I have travelled to Europe twice to observe reserve component training exercises. During these visits, we received 85 briefings, visited 28 sites and exercise demonstrations and met with 49 senior NATO military and civilian officials. We also concluded a Memorandum of Understanding with the Federal Republic of Germany that will create an exchange officer program for reserve component officers. In concert with the overseas exercise program, the reserve officer exchange program will enable us to create the kind of personal bonds that are so important should our forces be required to join with those of our allies on the battlefield. I want to assure this Committee that we will continue our effort in this area to make sure our reserve components are respected and work efficiently with our allies.

Conclusion

In summary, today's National Guard and Reserve enjoy better status and readiness, and continue to assume an increasingly important role in our defense strategy. While some problems remain, I am confident that as we continue to improve the effectiveness of the National Guard and Reserve, we will be improving the total capability of this Nation's defensive posture. That is, and must remain, our first and foremost aim.

Mr. Chairman this completes my testimony. I thank you once again for the opportunity you have given me to appear before this Committee today. I am prepared to answer questions.

DIRECTOR OF NEW OFFICE

Senator **Rudman**. I wonder if Senator Stennis has any remarks at all that he would like to make at the opening of this hearing.

Senator **Stennis**. Thank you, Mr. Chairman.

I am interested in the subject matter here. I don't have any comments at this time.

Senator **Rudman**. Mr. Webb. Thank you very much for your testimony. We certainly welcome you to this hearing this morning. You are the first occupant of your job. Previously I believe it was covered by the Deputy Assistant Secretary for Reserve Affairs.

You bring to this position a very distinguished record, not only as a member of the Armed Forces, but I think as a writer and one who has had a chance to intellectualize the issues we intend to deal with.

I would like to know how you are going to shape the role of your office in ways that might be different from that of your predecessor, because I think to a large extent when the first occupant of a particular position takes that position, there are certain historical perspectives that develop as to what that person does.

That is irrespective of what the statutes might say because people don't pay too much attention to what the statutes say. It is how people perceive the job.

What are you going to do that is different from what was done before to make this job effective?

Mr. **Webb**. I have certain advantages that none of my predecessors had. That is the rank of the office, itself. We have spent an enormous amount of energy over the last year working within the OSD structure in a very systematic way in order to make sure that the inputs of the new office are felt early and along the way during the decisionmaking process.

DEFENSE GUIDANCE

One good example of that is until this office was elevated, there was no direct participation by the office in Defense Guidance which is the document that gives the long-term goals for the Department of Defense which help shape budget matters and policy matters.

We participate on 26 different teams in the Defense Guidance process right now. Our current efforts will outlast me as an individual and will make the office participate as a full partner in the Office of the Secretary of Defense.

I feel very good about that process having taken place.

Senator **Rudman**. Your funding priorities request includes, as I stated earlier, 32 percent increase in procurement, 14 percent incease in pay.

RESERVE EQUIPMENT

Considering the $24 billion shortfall in Reserve equipment, I am curious why you are increasing the size of the force, why the decision was made, rather than bringing the equipment up to the level of the current force.

I would like to understand how you prioritize that.

Mr. **Webb**. The funding request itself is not different in any measure at all from what it was last year. There were a number of congressional add-ons, particularly on the air side that elevated the procurement reflected in the fiscal year 1985 column of this budget.

If you look at the trend over a number of years, you will see that fiscal year 1985 really represented a spike. The year before we were more than $1 billion below where we are now.

We have looked at the equipment issue very hard. When I first came in, the impression was that it was a $24 billion shortage. That was an RFPB estimate, essentially based on equipment on hand versus equipment needed under full mobilization, not counting follow-on gear; for instance, when a unit moves out of Fort Hood, TX, to European POMCUS locations.

Our budget submission reflects in just the last year and this year more than $9 billion for new equipment for the Guard and Reserve. In addition the flow of redistributed major equipment that will go into the Reserve components during those 2 years is $9 billion. We are talking in 2 years of over $18 billion worth of equipment. This has happened over the last several years under this administration.

The Guard and Reserve equipment report which my office just submitted has some interesting figures on this. This was just sent to the Congress within the past several weeks. If you look at fiscal 1984 and 1988 in the equipment report, there is good evidence that these numbers will hold. You will see Guard and Reserve equipment inventory will have increased by 38 percent during that period while requirements are increased approximately 20 percent.

You will also see in the fiscal 1984 distribution timetables that the Guard and Reserve components achieved 95 percent of their program which is an indicator that these goals that we are talking about are holding. You will see that the Army Guard increased from 70 to 81 percent of their requirements, the primary gain being in the area of combat weaponry where we will achieve a total of 243 M-1 tanks by the end of fiscal year 1986.

The Army Reserve is increasing from 57 to 75 percent of their requirements. Naval Reserve, 57 to 79 percent of requirements, the Marine Corps Reserve 73 to 89 percent, the Air Guard and Reserve from 91 to 99 percent and 83 to 97 percent respectively.

I am very optimistic about the results of the attention that has been paid in this area. We are not letting go, we are focusing on it.

The great fear that I have is that absent conscription, our manpower density in the Active and Reserve components is at risk. We have 2.16 million people in the Active Force, a little over a million in the Selected Reserve and 450 thousand in the IRR to examine as far as quality and locatability, but we have very few people if we did have to mobilize that could provide that immediate fill before we could get conscription in place.

I would say the priorities we have are well considered from our part and we hope you will agree after your review.

Senator **Rudman**. I think that is a very excellent answer.

EQUIPMENT SHORTAGES

I suppose what you have to assume here, and I guess you have to accept it as being a given, is that if you follow this policy that to some extent you exacerbate the equipment shortage because you are bringing in more people and keeping the shortage behind and that is a risk you have to accept because of the manpower requirement.

Mr. **Webb**. Yes, sir. We have equipment shortages on the active side, too. It is a problem that is servicewide. Again, we are not letting go of that. We are tracking it. The last 3 or 4 years I think have been a success story in that area.

SIZE AND EQUIPMENT OF THE FORCE

Senator **Rudman**. Both the size of the force and the equipment of the force are key components in the formula that equals, with a lot of manipulation, that mystical thing known as readiness. I suppose that if the forces get too big compared to the equipment level you have, then your readiness suffers, and yet I suppose if the mobilization base is smaller and you are equipped, your readiness suffers. You have to make that judgment.

Is your priority increasing the size or is it readiness as of the next several fiscal years?

I am not sure what readiness means, by the way. I have not had it readily defined. I have had a report from the House side. I think it was written by the same fellow who wrote Alice in Wonderland.

Mr. **Webb**. Readiness is indeed intangible. It depends on adequate equipment. It depends on manpower, it depends on force structure. It depends on training. It also depends on leadership. I would not give a crystallized definition of either.

We have constructed our office with three principal deputies in those three areas. We are concentrating on all three of them. Again, I have a very serious concern about the lack of manpower availability that we will require to mobilize.

We hate to see the manpower growth that we are trying to achieve be sacrificed for equipment, purely for equipment.

Senator **Rudman**. I may come back to that.

What I would like to do now is address those key questions to you at the outset.

I would now go back to what our normal format will be and ask the other distinguished gentlemen at the table with you if they have comments they wish to make as summaries of their statements. Your entire statements will be in the hearing record.

I am not sure which of the two stars has rank over the others. I know General Walker has three stars. I will call on General Walker and then from that point we will go from left to right.

NATIONAL GUARD BUREAU

STATEMENT OF LT. GEN. EMMETT H. WALKER, JR., U.S. ARMY, CHIEF, NATIONAL GUARD BUREAU

ACHIEVEMENTS OF NATIONAL GUARD

General WALKER. Thank you.

I appreciate the opportunity to again come before you and report to you on the current status of the Army and the Air National Guard.

I also have with me General Temple, the Director of the Army National Guard and General Conaway, Director of the Air National Guard.

Mr. Chairman, 1984 was a banner year for us, a year of great challenges, a year of real achievements and a year of real improvements. I am happy to report to you that the Guard achieved the highest strength in its history, 434,000 for the Army National Guard, 105,000 for the Air National Guard.

540,000 young men and women dedicated to the defense of this nation.

As the Secretary mentioned, I have concerns over the challenges that we face in achieving the strength programmed in the outyears. We can achieve this strength if we have the proper tools with which to work.

The GI bill that you passed last year, in my opinion, ought to be the core of any incentive program to bring young people into the Guard. But we can't live with the GI bill alone. The other incentives that we have previously had must be continued.

SELECTIVE RESERVE INCENTIVE PROGRAM

On September 30 of this year the Selective Reserve Incentive Program expires unless reenacted. Very frankly, I don't believe we can meet these challenges, 500,000 for the Army Guard and 121,000 for the Air Guard, in 1990 unless we have that kind of help.

I ask that the Congress please consider reenacting that Selective Reserve Incentive Program.

EQUIPMENT STATUS

Our equipment status is improving. We are being supported. We don't have 100 percent of our requirement, but neither do any of the components. We are getting modern equipment, M-1 tanks, M-60 A-3 tanks, BFV's, Infantry Fighting Vehicle's, COBRA and APACHE helicopters for the Army Guard, F-15's, F-16's, C-130's, C-141's and the C-5's for the Air Guard. So, we are being modernized.

The policy of the first to fight is the first to be equipped is working. Sometimes we don't think fast enough, but certainly it is doing the job for us.

TRAINING REQUIREMENTS

Our training requirement continues to increase as our training opportunities expand. We are participating in more exercises and more overseas deployments, than ever before.

With these opportunities our training successes continue to grow. I say to you, sir, these successes are proven. As far as your opening remark, these successes are proven in that we can accomplish any mission for which we are given proper resources. I think our performances assure that.

FUTURE OF RESERVE COMPONENTS

Mr. Chairman, I have a big concern about the future. That is we must in some way ensure the support of our families and employers and have the understanding of the general public of this country as to the role that the reserve components are shouldering in the defense of this country. I don't think they understand that today.

Our leadership in this nation, including the members of this Committee, must, in my opinion, help us get this story across. Your help means a tremendous amount to us.

The citizen soldier is willing to carry on two jobs. He is willing to work day to day to support his family and then he is willing to work at the defense of this nation. That is what our country and our people have to realize.

Mr. Chairman, the Congress has been good to the Army Guard and the Air Guard and I can't tell you how much we appreciate it.

I am ready for your questions.

[The statement of General Walker follows:]

STATEMENT OF LT. GEN. EMMETT H. WALKER, JR.

INTRODUCTION

The Army and Air National Guard today contribute a major portion of the U.S. conventional defense capability. Never before in its 347 year history has the Guard been so well trained, equipped and manned. The major improvements in these key readiness areas are directly attributable to increased Congressional support, OSD oversight of the Total Force Policy and Army and Air Force modernization initiatives. The increased resourcing we have received is the result of the continuous growth in Guard missions and responsibilities.

The focus of our efforts during the past year, and looking into the future, is to recruit and retain a high quality, professional force, to use training time to the best possible advantage and to make the most of every defense dollar we spend to equip and train the Guard. We continue to work to insure that no Army or Air Guard member on any future battlefield would have cause to say "Had only I been better trained, equipped or led." This is the challenge we have accepted and the charge we work to uphold.

Army and Air Guard units have deployed worldwide in the past year and trained side-by-side with their active component counterparts. These deployments have included JCS exercises, support to active component missions and units and real-time, real-world missions. In virtually every case, the Guardmembers have met or exceeded the mission requirements and have returned home with a real sense of accomplishment and contribution.

Our Army and Air Guard members are some of America's finest citizens. They continue to prove that with proper leadership, resourcing and family and employer support, they can and will perform any mission assigned.

STATE MISSION

The National Guard is the only dual missioned force among the services. Our primary mission, like that of the other components, is to be able, if called, to mobilize, deploy, fight and win. Our second mission, the state mission, is what makes us unique. The state mission requires the Guard to be able to answer the call of the respective Governors in responding to emergencies throughout the states and territories, assisting in the preservation and protection of life, property and public order.

During 1984, Army and Air Guard personnel responded to calls from 49 Governors on 423 separate occasions. The Guard provided emergency assistance ranging from rescue efforts at the AMTRAK train crash site, support of the National Search and Rescue Service and security assistance at the summer Olympics, to assisting local law enforcement authorities following natural disasters and during civil disturbances, and support to drug enforcement authorities. National Guard response to these emergencies involved more than 11,200 soldiers and airmen using approximately 102,000 mandays at a cost to the respective states exceeding $7.6 million.

The continuing, varied requests for specialized equipment and personnel for a variety of missions continue to reflect confidence in and public acceptance of the National Guard as a professional emergency force available to protect the citizens of the states and territories.

FEDERAL MISSION

ARMY GUARD ORGANIZATION

Forty-six percent of the combat units and 37 percent of the support forces within the Total Army are provided by the Army National Guard. Major unit contributions to the Total Army force structure include nine divisions, fourteen separate brigades, four armored cavalry regiments, an infantry scout group, two special forces groups, five roundout brigades and seven roundout battalions. Roundout units provide the force structure essential to an Active Component division to fill its total organizational requirement.

The 41st Infantry Brigade, Oregon Army National Guard, roundout to the 7th Infantry Division, will change to roundup status in FY 85. This change was caused by the conversion of the Active Army's 7th Infantry Division to a light infantry division. As a roundup brigade, the 41st will retain its current resourcing priority and maintain its former training relationship with the 7th Infantry Division. However, it will become a corps asset rather than a divisional unit.

In September 1984, Department of Army announced that two more light infantry divisions will be added to the Active Component force structure, commencing in FY 85. These are the 10th Mountain Division (Light), which will be based at Ft. Drum, New York and the 6th Infantry Division (Light), which will be located in Alaska. Both divisions are programmed to have Reserve Component roundout brigades.

In FY 86, we will begin organization of a new light infantry division through the consolidation of existing brigades. The new division will be the first and only light infantry division programmed for the Army National Guard, our tenth combat division, and will increase the number of Total Army divisions to 28. The designation of the new division will be the 29th (Blue and Gray) Infantry Division (Light), headquarted at Ft. Belvoir, Virginia.

The roundout role for the 29th Infantry Brigade, Hawaii Army National Guard, roundout to the 25th Division, will change to roundup in FY 86 as the 25th Division converts to the light infantry division configuration. As in the case of the 41st Brigade, the 29th will maintain its current resource priority and training relationship with the 25th Division, but will become a corps, rather than a divisional, asset. Consequently, in FY 86, the number of Army National Guard roundup brigades will increase to two. A total of 80 activations and 92 conversions are programmed for Army National Guard units in FY 86.

AIR GUARD ORGANIZATION

The Air National Guard's Federal mission, as part of the total Air Force, is to provide units of properly equipped and trained personnel for prompt mobilization whenever called upon in time of crisis. Our units also perform designated Air Force missions during peacetime, primarily as a by-product of training.

The Air Guard is manned and ready to carry out this dual mission. It is our belief that strength through readiness is the key to success.

The readiness of our units continues to remain high despite increased taskings and conversions to new and more complex weapon systems. Military manning was over 105,000 at the end of FY 84 and is projected to be 108,000 at the end of FY 85 and 111,000 by the end of FY 86. The Air Guard flies more than 1,600 aircraft in a variety of demanding missions, ranging from Air Defense and Tactical Fighters to Strategic Air Refueling and Strategic Airlift. We participate as full partners with the active Air Force and the Air Force Reserve in carrying out these missions assigned by our civilian leadership.

FORCE STRUCTURE

Air National Guard flying units are organized into 24 wings, 67 groups and 91 flying squadrons. Modernization of these units continues as evidenced in the FY 86 public announcement of force changes. We have announced the first F-15 conversion in the Air Guard at New Orleans in FY 86, with a second unit programmed in FY 87 at Dobbins, Georgia. We are getting back into the strategic airlift business with activation of our first C-5 unit at Stewart Airport, New York in FY 85 and our first C-141 unit at Jackson, Mississippi in FY 86. We will also be activating our second Air Guard F-16 unit at Kelly

AFB, Texas. Future programmed conversions depend on programmed procurement rates. Modernization of the Air Force in general and the Air National Guard in particular depends heavily on your support of these procurement rates.

In FY 86, the Air Guard will continue its modernization efforts in several major mission areas. Two Tactical Fighter units (one F-4D and one F-4C) will change series to the F-4E and increase their primary aircraft authorization from 18 to 24. Two Tactical Airlift units (one C-130A and one C-130E) will change series to the C-130H. The A-7 Combat Crew Training Unit at Tucson, Arizona will have F-16s added to its inventory, and the Boise, Idaho RF-4C Combat Crew Training unit will increase its primary aircraft authorization from six to 12 aircraft. Finally, six units will upgrade their operational support aircraft by replacing their older C-131s with new C-12Fs.

As a result of our modernization efforts, Air National Guard flying units continue to make a substantial contribution to the total Air Force combat capability and will fulfill a large portion of force commitment during any future crisis. In FY 86, the Air National Guard will possess 73 percent of the total Air Force Air Defense Interceptor forces, 48 percent of Tactical Reconnaissance forces, 32 percent of Tactical Airlift forces, 25 percent of Tactical Fighter forces, 17 percent of Aerial Refueling forces, 14 percent of Rescue and Recovery forces, 15 percent of Special Operations forces, 24 percent of Tactical Air Support forces and two percent of Strategic Airlift forces. In addition, 15 Air Guard flying units are tasked in Central Command (CENTCOM) plans.

The continuing emphasis on modernization and readiness has resulted in adjustments of the organization precedence ratings for all Air National Guard units to equal levels with comparable Air Force units. This is in consonance with Department of Defense (DOD) policies, and places the Air National Guard on an equal footing in the DOD Logistics System with its active counterparts.

Equally important to the success of the Air National Guard mission are our mission support units. There are 244 independent units heavily concentrated in the areas of base fixed communications, combat communications, weather, tactical control, engineering installation, civil engineering, medical and air base ground defense.

Base communications flights provide fixed communications support to our flying units. These units operate and maintain the base fixed and tactical telephone systems, base communications centers, ground-to-air radios, intra-base radios, high frequency radios and base cable plants. Many of these flights also have separate, deployable elements which support Strategic Air Command, Military Airlift Command and Tactical Air Command at alternate recovery bases in the Continental United States and at collocated operated bases in Europe.

Our 51 combat communications units are equipped and staffed to support the Tactical Air Forces. They provide specific communications service to forward deployed commanders and provide restoral service to the Defense Communications System. They are also equipped to provide terminal air traffic control facilities and services. In FY 84, 15 combat communications units were tasked in Central Command (CENTCOM) plans.

A policy on allocation of new capabilities and replacement equipment has been implemented within the Air Force that will expedite the modernization of Air Guard Combat Communications equipment. This policy requires equipping units based on their primary mission area and insures Air Guard parity with the active Air Force.

The Air Guard has 39 Weather flights and one Weather squadron, most of which provide weather support to Army Guard and Reserve units. We do have one Weather flight tasked to support the Air Force Tactical Weather System. Weather units train with the Army units that they are tasked to support.

Our 31 Tactical Control units operate control and reporting centers and posts in addition to providing forward air control posts. All units have wartime taskings and quick response deployment schedules. Five units deployed to Europe in FY 84 to support exercises in Denmark, Norway and Italy. All our units now possess the TPS-43E tactical radar.

We also have three Aircraft Control and Warning squadrons that provide around-the-clock air surveillance radar coverage for Hawaii and Puerto Rico. In FY 84, a fully automated Regional Operational Control Center became operational in Hawaii and is operated and maintained by Air Guard personnel.

We now have two tasked units to provide equipment and personnel augmentation as part of the Joint Communications Support Element. The mission of these units is to support Joint Task Forces during contingency military operations or disaster relief and evacuation activities.

Our Engineering Installation (EI) squadrons are equipped and trained to engineer, install, relocate, remove, restore and accomplish on-site depot level maintenance on radars, antennas, cable plants, radios and teletype and communications centers. Our EI units represent the majority of the total Air Force capability for this type of work. Each year, these units accomplish a significant portion of the total Air Force EI workload.

Our Civil Engineering flights are equipped to undertake construction, alteration and repair projects to sharpen their wartime skills as well as to complete urgently needed projects for their host base (either active Air Force or National Guard). A second Civil Engineering Red Horse Squadron (Rapid Engineering Deployment Heavy Operation Repair Squadron Engineering) has also been federally recognized.

A Prime Ribs (Readiness In Base Services) expansion and realignment program scheduled to begin in FY 1986 will reduce the Air Force wartime shortfall in food services and support by over 1100 positions. This will increase the Air Guard contribution to the total Air Force wartime food services and support requirement from 28 percent to 35 percent.

The Medical Service of the Air National Guard supports our 91 flying units in peacetime and fulfills the medical readiness requirements of the active Air Force for wartime planning. Our Medical Service consists of 91 medical units (seven flights and two squadrons). Significant personnel increases are taking place in the Aeromedical Evacuation units with additional personnel in the program for our hospitals and clinics. These increases respond to enhanced wartime mission requirements for the Air Guard Medical Service.

Like their Flying unit counterparts, our Mission Support units contribute heavily to the total Air Force combat capability. In FY 85, the Air Guard will possess 70 percent of the Air Force Combat Communications forces, 60 percent of Tactical Weapons Control, 12 percent of the Weather Reporting and Forecasting forces and 30 percent of the Aircraft Control and Warning forces.

MANNING THE ARMY GUARD

The Army National Guard completed FY 84 by posting one of its most successful years ever in terms of strength gains. During the year, we achieved our highest end strength in history, closing the year with 434,259 men and women. This increase of 17,081 from the end of FY 83 represents 100.3 percent of our programmed end strength, 99.8 percent of authorized strength, and 93.4 percent of wartime required strength. The end strength is composed of 41,847 officers and 392,412 enlisted personnel.

Women have joined the Army Guard in increasing numbers as evidenced by the strength figures for FY 84, which included 2,072 officers/warrant officers and 20,432 enlisted women. Initiatives taken to encourage female accessions include the FY 85 State Accession Mission, which, for the first time, included a female nonprior service objective.

Minority commissioned/warrant officer strength at the end of FY 84 was 3,957 (3,495 commissioned, 462 warrant officers). This represents a fiscal year increase of 918 officers and 9.5 percent of the Army Guard officer force. The total for black officers was 1,883 (1,737 commissioned, 146 warrant officers), 4.5 percent of total Guard officers. Female commissioned/warrant officer strength was 1,946/126, 5.0 percent of our total officer force. We remain committed to the goals and principles of minority officer participation within our officer force as originally established by the Minority Officers Recruiting Effort (MORE) Program in March 1978.

Commissioned and warrant officer strength reached 97.3 percent of our programmed objective for FY 84. Accessions from the Reserve Officers Training Corps (ROTC) accounted for 41.4 percent of total commissioned officer accessions. By FY 90, ROTC accessions are expected to account for over 50 percent of commissioned officer accessions. This will make ROTC the largest single source for Army National Guard lieutenants. During FY 84, State Officer Candidate Schools (OCS) produced 31.6 percent of our commissioned accessions. Due to production constraints imposed by Department of Army, this percentage is expected to drop to 23 percent in the future.

Retention of first-term and career soldiers was an integral part of our historic end strength accomplishment in FY 84. The efforts of our expanded retention force, strength management education and training, command emphasis at all levels, resurgence of patriotism and positive attitude toward military service enabled us to achieve 82.8 percent of programmed retentions during FY 84.

Quality of our enlisted force has steadily improved. In the last eight years, we have increased the number and percentage of high school diploma graduates (HSDG) while reducing the number and percentage of Test Score Category IV accessions. In FY 84, 68.8 percent of NPS accessions were HSDG and only 6.9 percent were from the lowest test score category.

To achieve established end strength in FY 85 and FY 86, 438,383 and 450,496 respectively, numerous dynamic initiatives have been identified and implemented. The Director, Army National Guard, internally reprogrammed 601 personnel authorizations to expand the existing recruiting force, providing 24 percent growth in the Full-Time Recruiting Force (FTRF) during FY 85. An increase of 225 FTRF personnel is included in FY 86.

In FY 85, an additional 65 Active Guard/Reserve (AGR) personnel will be tasked with increasing the retention of trained personnel who complete their required term of service. With this expanded recruiting and retention force, an aggressive national advertising campaign, and a viable enlistment/reenlistment/educational assistance bonus program, we are confident we can attain programmed FY 85 and 86 end strength.

MANNING THE AIR GUARD

The Air Guard achieved a military end strength of 105,012 in FY 84. This is the highest level ever achieved by the Air Guard. It is the sixth consecutive fiscal year that programmed end strength levels have been exceeded.

The Air Guard's FY 85 end strength program is 101,221 drill strength and 6,469 AGR (Active Guard/Reserve) for a total strength of 107,690 with an average strength of 105,438. In FY 86, we have programmed 103,590 drill strength and 7,269 AGR for a total end strength of 110,859 and an average strength of 108,700. This strength level supports approximately 99 percent of the Air Guard's projected wartime requirements.

Although the Air Guard has consistently exceeded programmed strength levels, many critical skills remain below acceptable levels. At the end of FY 84, 54 percent of our vacancies were in hard-to-fill areas such as aircraft maintenance, munitions systems, aircraft armament and security police. Additionally, the Air Guard has projected a growth of over 15 percent by FY 90. Of this growth, 35 percent will be in such critical skills as aerial port, Red Horse (civil engineering), medical and aircraft armament. We expect to continue to meet our strength goals, but anticipate a greater challenge as our program strength levels increase and the recruitable population age decreases.

The Air Guard's recruiting program uses a precision recruiting approach. This approach keynotes recruiting for existing or projected critical skill vacancies. The overall responsibility for recruiting rests with the respective State or Territory. The addition of a full-time retention force has paid off, as losses again declined last year for the sixth year in a row. We continue to focus on recruiting rated officers, medical officers, minorities and women. In fact, the percentage of women and minorities in the Air Guard increased again in FY 84 for the fourth consecutive year. The continuation of recruiting and retention as co-equal programs has aided the Air Guard in meeting its end strength objectives as well as furthering our progress in reducing critical skill vacancies.

In its Total Force role, the Air National Guard is highly dependent on personnel who are competent and reliable. By recruiting a higher percentage of prior active and reserve component personnel into the Air Guard, we retain the maturity and experience in the enlisted force and avoid the high cost of basic military training (BMT) and initial skills technical training. Since FY 80, our enlisted accessions have consistently demonstrated a 60 percent prior service and 40 percent non-prior service mix.

In April 1984, the Secretary of the Air Force established an FY 85 female accession goal of 17 percent. The Air National Guard exceeded that goal in FY 83 with 17.1 percent of accessions being female. In FY 84, 17.5 percent of all ANG accessions were women. At the end of FY 84, participation by women in the Air Guard increased to 10.8 percent of the force. It is also important to note that even during years when overall accessions were declining (i.e., FY 80-83), the rate of female accessions into the Air Guard showed a steady increase.

ARMY GUARD OFFICER/WARRANT OFFICER DEVELOPMENT

We have continued to raise standards for appointment, promotion, and retention of both commissioned and warrant officers. Today's Army National Guard officer education profile shows 53 percent of commissioned officers have a baccalaureate degree or higher. In order to increase this educational level, we have implemented the following changes to the civilian education requirements for commissioned officers:

a. All of our commissioned officers are required to complete at least two years of college, or its equivalent, by 1 October 1989.

b. All State OCS graduates must have two years of college prior to appointment starting in 1989.

c. All officers appointed after 30 September 1983, are required to have a baccalaureate degree before promotion to major.

Resident requirements for military education now result in 100 percent Basic Course attendance compared to approximately 65 percent one year ago.

The educational goal established for our warrant officer corps is achievement of an associate degree. Currently 45 percent possess this level or higher civilian education. In order to ensure that our 8,805 warrant officers keep pace with the Army's new technology, systems and overall force integration, an extensive Professional Development Program will continue to demand strict military education requirements for appointment, promotion and retention. During FY 85, a new warrant officer appointment procedure will be developed for the Army National Guard and implemented in early FY 86.

To assist our officer corps in achieving these new educational requirements, we have implemented the Assistance for Military Professional Development (AMPD) Program. Currently providing educational assistance to our officers and officer candidates, this new initiative allocates military education funds to each state for use in defraying 75 percent of tuition and laboratory fees identified by the school at the time of registration. AMPD tuition assistance is only available to drilling Army National Guard officers or officer candidates not receiving tuition assistance from any other source, i.e., G.I. Bill. The policy of providing 75 percent tuition assistance for these personnel under AMPD is intended to coincide with support provided to our AGR personnel under the Army Continuing Education System (ACES).

Additionally, Department of Army has extended the ACES Program to the Reserve Components beginning 1 October 1985. The program will provide educational assistance to all Army Guard personnel in their pursuit of continuing education.

ARMY GUARD FULL-TIME SUPPORT

Our Full-Time Support program consists primarily of a combination of Active Guard/Reserve (AGR) full-time military members and Military Technicians. Together, the AGRs and Technicians perform essential services without which the Army National Guard would have no continuity of operations and could not be effective in accomplishing the required training, supply, maintenance, administration and management to meet federal missions. The Full-Time Support Program is the "backbone" of the Army National Guard.

The increased strength, new units, and great amounts of new equipment being delivered to the Army National Guard have greatly increased full-time support requirements. To keep pace with these requirements, we are requesting an increase of 10,096 AGR in FY 86, bringing our total to 30,679 at year end. The requested increase in AGR supports our highest priority requirement of providing full-time manning for our combat and combat support units. There is also a need for additional technicians to support increased requirements for supply, maintenance, and administrative functions.

We have found, through experience and analysis, that AGR personnel are better suited for providing full-time support to units, whereas military technicians are best suited for employment in support activities, including headquarters, supply and maintenance. We would like Congress to revise the language prohibiting the movement of technician positions and allow us to implement a mix of the force established by Congressional direction in 1982.

AIR GUARD FULL-TIME SUPPORT

In FY 84, the Air Guard exceeded its combined military technician and full-time military (AGR) end strengths. In FY 85, we expect to fully meet our full-time end strength programs, which are 937 higher than FY 84 actuals. In FY 85, our full-time personnel growth was originally programmed as all AGR. However, as a result of Congressional action, 50 percent of this growth was transferred from AGR to civilian technician authorizations.

Future manpower growth will contain a mix of technicians and AGR personnel. This mix will be determined based on the missions to be performed. The majority of our maintenance and support personnel are currently technicians, and this type growth will be programmed as technicians in the future. Security, field training sites, ranges, detached alerts, recruiting retention and similar type programs which are military in nature will be programmed as AGR. We anticipate that our full time force will contain approximately 75 percent technicians and 25 percent AGR.

EQUIPPING AND SUSTAINING THE ARMY GUARD

Although equipment shortfalls remain, never before in our history have Guardmembers been better equipped in peacetime.

Department of Army has initiated plans to accelerate delivery of modern equipment to the Army National Guard. At the end of FY 84, our tank force consisted of approximately 2900 main battle tanks. Planned delivery of 180 M1 tanks in FY 85 will increase this modern system in the Army Guard to a total of 240. Department of Army has proposed increased fielding of M60A3 tanks to the Army National Guard during the FY 86-92 time frame. If adopted, all armor units will have 100 percent fill of M60A3s and M1/M1A1 tanks by the end of FY 92.

Accelerated fielding of Field Artillery systems is continuing. TACFIRE, Battery Computer System, and FIREFINDER fielding have met with repair parts and maintenance support problems, which have hindered attempts to accelerate the fielding of these systems. Current staff actions in the areas of upgunning current 105mm units to 155mm weapons and fielding of the Multiple Launch Rocket System in our units have demonstrated the Army's desire to accelerate modernization efforts for the Army Guard.

In FY 84, equipment worth $796 million was distributed to the Army National Guard by Department of Army. Based on current plans, $1.045 billion worth of equipment will be distributed to the Army National Guard in FY 85. This will include such major items of equipment as the M1 tank, Bradley Fighting Vehicle, Improved TOW Vehicle (ITV), M198 Howitzer, Chaparral, and AH-1S Cobra Attack Helicopter. Department of Army procured over $900 million worth of equipment for the Army National Guard in FY 84 and projects procurement of equipment worth $1.7 billion in FY 85 and $1.5 billion in FY 86. This equipment will be delivered in the FY 85-89 time frame.

Congress continued to strongly support equipment procurement for the Army National Guard in FY 85. An appropriation of $150 million was provided for the Army Guard to procure equipment, continuing a practice which began in FY 82. Through FY 85, Congress has provided the Army Guard with appropriations totalling $350 million specifically for equipment procurement. We have utilized these appropriations, in coordination with the Department of Army staff, to improve the equipment posture of our early deploying units. The $150 million provided in FY 85 will procure Armored Personnel Carriers, M198 Towed Howitzers, Improved TOW conversion kits, TRITAC communications equipment, electronic shop shelters, Five-Ton Cargo Trucks, and Commercial Utility Cargo Vehicles.

Congress has also directed Department of Army to procure equipment for the Army National Guard from its Procurement Army appropriations. As a result, Department of Army will procure AH-64 and UH-60 helicopters, C-12 aircraft, Chaparrals, and ITVs for the Army Guard with funds appropriated in FY 85. Funds were also provided in FY 85 for the upgrade of AH-1G helicopters to the AH-1S COBRA/TOW configuration. Since FY 78, Congress has directed procurement of over $600 million worth of equipment for the Army National Guard from Department of Army appropriations. This $600 million added to the $350 million mentioned above totals to over $950 million worth of equipment provided to the Army National Guard as a result of Congressional initiatives since FY 78.

The significant influx of resources to the Army National Guard serves to reinforce the fact of our nation's reliance on the Guard as a key element in national security. Nevertheless, we remain critically short of equipment which we view as essential to permit our soldiers to adequately conduct sustained combat operations.

ARMY GUARD AVIATION EQUIPMENT

We have a present requirement for 493 attack aircraft. In FY 86, we will have a shortfall of 277 attack aircraft. These shortages will be alleviated as the production of AH-64 aircraft for the Active Component causes a displacement of additional AH-1S helicopters to the Army National Guard. The 18 AH-64s, provided by Congress from FY 85 procurement, are scheduled for FY 87 fielding to an attack battalion in the North Carolina Army National Guard.

Six C-12 aircraft, provided to the Army National Guard from Congressionally directed FY 85 procurement, will expand our C-12 fleet to a total of eighteen. The influx of C-12 aircraft into the Army National Guard has provided improved command and control of geographically dispersed units. It has also provided for redistribution of aircraft throughout the Army

National Guard, providing needed aviation assets to states which previously had been denied a reliable command and control capability.

We operate a fleet of 72 CH-54A/B helicopters which provides our heavy lift capability. The projected phase-out for the CH-54s has been established as the year 2000. In order to maintain these as deployable, supportable and mission capable systems, several actions are required; including increased repair parts procurement, product improvement applications for sustainability, depot level repair of the airframes and an avionic/electronic upgrade. The latter is required to maintain communications compatibility with the more modern Army aircraft.

ARMY GUARD AIR DEFENSE EQUIPMENT

We are currently organized with eight battalions of M42 (Duster) Air Defense Artillery (ADA) units, supporting the eight divisions which currently have ADA organizations, and one U.S. Roland battalion, the only unit of its type in the Total Force. The present force modernization plan replaces our Duster units in the FY 85-90 period. Initially, this will be accomplished by converting four Duster battalions to Chaparral and the other four battalions to Stinger organizations. The Chaparral fire units will be fielded from Active Component draw down and other Army inventory for the first and second battalion conversions. The third and fourth battalions are scheduled to be equipped with new equipment purchases. One Duster battalion began its transition to Chaparral in FY 84 and will complete the process in FY 85. The second Duster battalion will begin conversion in FY 85. The Stinger units will be equipped initially with training devices only; subsequently, they will receive the new Lightweight Air Defense System (LADS). Our ADA force will be increased in the future by the activation of six additional divisional battalions, two units for the newest Guard divisions and four units to provide backfill for the Chaparral units. Chaparral units will become corps level battalions when the divisional units are activated to replace them. All divisional ADA units will eventually be fielded with the new LADS. Our ADA force will then consist of ten divisional battalions, four corps Chaparral battalions and one U.S. Roland battalion. Additionally, three Hawk battalions are to be activated in the Army National Guard for corps missions utilizing equipment displaced from Active Component units.

ARMY GUARD COMMUNICATIONS-ELECTRONICS EQUIPMENT

In 1982, we conducted a Communications-Electronics Equipment Study which identified problems in the areas of interoperability, compatibility and supportability. These problem areas were identified to the Army Signal Center, Training and Doctrine Command, Army Materiel Command, Communications-Electronics Command and Department of Army. Two major interoperability concerns were: (1) first generation multichannel Frequency Division Multiplex (FDM) equipment in our signal battalions and separate signal detachments, and (2) manual switching equipment found throughout our force structure.

Another major equipment issue which has now been identified is Communications Security (COMSEC) for combat net radios in our units. This is an area of critical importance to combat and combat support units. Although VINSON COMSEC equipment is now critically short, it is being fielded and the fielding pace will accelerate over the next two years.

Tactical automation is now programmed by the Department of Army for issue to approximately one-third of all of our battalions. Initially, tactical automation will be provided down to battalion level in the form of Tactical Army Combat Service Support Computer Systems (TACCS).

Since the previously mentioned FY 82 study, we have utilized equipment procurement appropriations provided by Congress to procure over $125 million worth of modern, state-of-the-art communications equipment. Coupled with earlier Congressionally directed procurement from Department of Army appropriations, we will receive distribution of approximately $250 million worth of modern communications equipment in the FY 85-87 timeframe.

Signal force structure and signal architecture actions initiated by Department of Army will push our signal structure and equipment posture into a position of being fully interoperable and compatible with the Active Component by the end of FY 92. The capability of our signal units and signal equipment to meet commander's communications requirements, is rapidly improving. Of special importance for future capability are the results of Battlefield Communications Review II. This strategy equips the Army National Guard simultaneously with the Active Component on a theater and corps set basis.

ARMY GUARD ORGANIZATIONAL CLOTHING AND EQUIPMENT

The Organizational Clothing and Equipment (OCE) program has been underfunded for a number of years, while requirements have continued to grow. Within the overall program of OCE, the most important area of concern is the status of Chemical Defense Equipment (CDE). We have pursued an aggressive program to purchase CDE for contingency and training stocks for the entire force. Limitations on funding and the nonavailability of some protective clothing and equipment items have slowed the progress toward achieving these goals. Shortages of CDE amounted to $66.6 million at the end of FY 84 and are projected to be $55 million at the end of FY 85. With the introduction of the new chemical defense battle dress overgarment and increased funding in FY 85, our chemical defense posture is improving. We will receive 50,000 sets of the battle dress overgarment in early FY 85 with an additional 250,000 sets programed for late FY 85 and FY 86. This should provide contingency stocks for two-thirds of our force while freeing up a significant number of current contingency assets for training purposes. Funding provided in the FY 85 budget and requested for FY 86 will support procurement of the Personnel Armor System Ground Troop (PASGT) helmet and vest, Combat Vehicle Crewman Uniform System and the Extended Cold Weather Clothing System. These are modernized systems which are scheduled for fielding to the Army National Guard beginning in FY 85. Significant quantities are expected to be delivered in FY 86.

ARMY GUARD REPAIR PARTS

Our total repair parts resource requirement reflects maintenance costs directly related to the age of our equipment, to increased quantities of new and more complex equipment, and to the rate of equipment usage by our units to support year around training programs. Repair parts in short supply are high dollar value items such as combat vehicle/tank track, ballistic fire control components, artillery barrels, electronic equipment modules and circuit cards, rust repair components, engineer construction equipment parts and those repair parts needed to support older models of equipment that are no longer in the Active Army equipment inventory. Funding for repair parts in FY 84 was approximately $7 million below the FY 83 funding level of $123.8 million. This reduced funding, caused by negative growth in the FY 84 Operations and Maintenance, Army National Guard appropriation, resulted in a significant year end FY 84 repair parts shortfall of $132.6 million. Funding for repair parts in FY 85 provides an increase of $72.3 million above the FY 84 level. The most notable improvement will be realized in the increased stockage levels of combat essential Prescribed Load List (PLL) and Authorized Stockage List (ASL) repair parts, reduced to almost zero balance levels during FY 84. Some repair parts shortfalls will continue in FY 85 due to significant increases in both equipment inventory and in the variety of makes and models of equipment to be maintained. The repair parts backlog at the end of FY 85 is projected to be $95.0 million. Repair parts funding requested for FY 86 provides an increase of $36.5 million above the FY 85 level. This increase will improve our materiel readiness program and equipment deployment capability. It will ensure that adequate quantities of repair parts are available to sustain day-to-day maintenance operations. However, significant shortages for PLL and ASL repair parts will continue in FY 86. The repair parts backlog at the end of FY 86 will be approximately $138.6 million.

ARMY GUARD DEPOT MAINTENANCE

A series of depot maintenance programs designed to improve readiness is being initiated in FY 85, or continued from prior years, and is expected to continue in the future. Product Improvement Programs for modernization of combat vehicles continue with upgrade of M109A2 155mm self-propelled howitzers to the M109A3 configuration, anticipated to be completed in FY 85. Conversion of the M113 family of vehicles to the A2 model, begun in FY 84, is expected to be complete in FY 89. The Coordinated Logistics Support Program was initiated with Communications-Electronics Command in FY 85 and provides improved direct exchange and repair and return to user programs for communications and electronics equipment. Additionally, we are heavily involved in a rustproofing program for all commercial and tactical wheeled vehicles in the inventory. The program is designed to extend the life and ensure availability of these vehicles for the foreseeable future, at a cost of approximately $5 million per year. Programmed completion date for the current rustproofing program is FY 89.

We will implement or continue in FY 85 significant aviation depot maintenance programs which are designed to enhance the readiness of the aviation assets in our inventory. An overhaul/modification program for OH-6 aircraft is scheduled for start-up in FY 85 at the Mississippi Army National Guard Aviation Classification and Repair Activity Depot (AVCRAD). This program will provide increased reliability and sustainability of the OH-6 aircraft. During FY 85, the OH-58 tail rotor and power droop improvement program will commence. These improvements will greatly increase the reliability and safety of the OH-58 aircraft. We will continue the U-8F aircraft engine modification contract with completion scheduled in FY 86. Cost savings resulting from painting aircraft at the AVCRADS rather than utilizing depot labor at Corpus Christi Army Depot have been in excess of $10 million since this program was instituted in FY 81.

RANGE MODERNIZATION

Our range modernization program is aimed at management of range design planning and construction. Additionally, the program will provide a means to meet the training needs generated by force modernization and upgrade existing facilities which have suffered from over a decade of underfunding. An Army National Guard Five Year Master Range Plan has been developed to interface with the Army's Master Range Plan. We are scheduled to receive the Remote Target System on a number of proposed ranges. The Multipurpose Range Complex will satisfy gunnery requirements for the total family of weapons currently on hand and projected for the Army National Guard inventory.

TRAINING THE ARMY AND AIR GUARD

We rely upon effective training to make our quality people and equipment work together as a team. We may never have all the resources we require, but we are doing everything in our power to ensure that our soldiers and airmen are as combat ready as possible with what they have. As a result, our training continues to be challenging, demanding and effective.

ARMY GUARD UNIT TRAINING

In the future, we will continue pursuing our goal of "training up" -- conducting combined arms training in our units throughout the Guard, at the level at which they will be required to fight.

Within the last two years, two of our roundout battalions have experienced the rigors of training as part of a National Training Center rotation at Ft. Irwin, California. These units trained as an integral part of a brigade task force from their parent Active Component division. Lessons learned by these units during their National Training Center experience provide the basis for needed adjustments to their home station training strategy. Five of our roundout battalions will participate in National Training Center rotational training in FY 85 and three more will be challenged by this valuable training experience in FY 86.

Joint Chiefs of Staff (JCS) and Army Major Command (MACOM) exercise participation is designed to train units to evaluate standing operating procedures and war plan development; provide opportunities for CAPSTONE wartime mission training and to strengthen CAPSTONE relationships; train commanders and staffs in the Airland Battle doctrine in as realistic an environment as possible; exercise and evaluate personnel, administrative, logistics, and communications systems; and weld all elements -- combat, combat support, ~~and combat~~ service support -- into an effective combined arms force. During FY 84, 284 Army National Guard units and unit cells, involving approximately 13,000 personnel, participated in 14 major JCS/MACOM exercises in the Far East, Europe, Central America and the Caribbean. Forty-one units and unit cells participated in REFORGER 84, to include two battalions which shipped their equipment to Europe for the exercise. FY 85 plans call for participation by 318 units and unit cells in JCS/MACOM exercises. Deployment for REFORGER 85 will involve 51 units and unit cells, to include a mechanized infantry battalion task force and an infantry battalion, which will ship their equipment, and three company size units which will draw POMCUS (Prepositioning Of Materiel Configured to Unit Sets). Ninety-one Army National Guard units and unit cells will participate in WINTEX 85, a JCS/NATO exercise conducted in Europe, and an infantry battalion will participate in BRIM FROST 85 in Alaska. Current plans call for participation by 394 units and unit cells in JCS/MACOM exercises in FY 86. This includes a mechanized infantry brigade which will deploy with its equipment for REFORGER 86.

Early 1984 marked the start of a unique Southern Command (SOUTHCOM) exercise called Minuteman. Exercise Minuteman I was a JCS approved, SOUTHCOM sponsored, combined task force engineer training exercise conducted on the western coast of the Azuero Peninsula, Republic of Panama. The exercise objective was to provide realistic, environmentally unconstrained engineer training, tropical medicine training and logistics over the shore training not available in the United States during stateside Annual Training. From 11 March to 5 May 1984, a total of 750 soldiers from the Puerto Rico, Louisiana, and Florida Army National Guards, the 193rd Infantry Brigade (Panama) and the Panama Defense Force joined forces to construct a 15 kilometer road and to survey an additional 27 kilometers of road in this remote area. At the present time, Exercise Blazing Trails 85, the continuation of Minuteman I, is underway. The exercise objective is to repair and construct 42 kilometers of road and bridges. Engineer, logistical, medical and security support are being provided by units from Alabama, Louisiana, Missouri, North Carolina, Puerto Rico and Wisconsin. Public affairs detachments from Florida, Kentucky, New Jersey and Texas are also participating. Exercise Blazing Trails 85 is providing our units and personnel outstanding training opportunities in a realistic and demanding environment.

Our ODT program, which has deployed Guard members to Europe, the Far East and Central America, continues to expand. A total of 527 units and unit cells are scheduled to participate in ODT during FY 85 -- a significant increase since the program began in 1976 with only six units.

AIR GUARD UNIT TRAINING

I talked about the significant contributions our flying units make as a by product of training. Our mission support units have also made impressive training advances. In the past three years, our combat communications units have deployed approximately 1,400 personnel to Europe, Honduras, Egypt and Korea in support of major exercises. The combat readiness of these units will be tested again in FY 85 by their participation in over 30 exercises and deployments worldwide.

Our Tactical Control units train at their home stations by participating in system-wide simulated exercises. As with combat communications, these units also play a major role in Joint Chiefs of Staff exercises. In FY 84, our five deployments to Europe were the third in a series of deployments of tactical control units and demonstrated our global readiness as well as providing the units with realistic training. Six deployments have been programmed for FY 85.

Two of our Engineering Installation (EI) units deployed to Europe in June 1984 and performed successfully under simulated wartime conditions. An Air

Guard EI unit also won the FY 84 Air Force Communications Command "SHOOTOUT" competition, with another Air Guard unit finishing in second place. "SHOOTOUT" is a series of competitive taskings undertaken by Air Guard and active Air Force units. Several exercises are also scheduled for Air Guard EI units in FY 1985.

Our Civil Engineering units also participate in Joint Chiefs of Staff European and Pacific exercises. A steadily growing trend of National Guard involvement in joint exercises has enhanced training and the Total Force concept.

Our Prime Ribs teams have supported Air Force requirements with deployments to Air and Army National Guard and Air Force bases in the United States as well as locations in Europe, Korea and above the Arctic Circle in Alaska.

ARMY GUARD INDIVIDUAL TRAINING

Another proven success is the Army National Guard Key Personnel Upgrade Program (KPUP). The purpose of KPUP is to further develop key personnel in our units through direct association with their Active Component counterparts during tactical training exercises. It allows our personnel to perform in their assigned military occupational specialty (MOS) either in place of or alongside their Active Component counterpart.

These experiences of employing their skills with active units and utilizing the most modern equipment under demanding tactical situations have greatly contributed to improved MOS proficiency. Additionally, it has given our Guardmembers great confidence in their abilities. They return to their units with valuable tactical experience and new techniques which they have practiced in real tactical situations.

ARMY GUARD NCO EDUCATION AND TRAINING

It is the responsibility of National Guard leadership to provide our noncommissioned officers with the training they need and deserve to permit them to lead our soldiers in battle.

Our commanders and senior noncommissioned officers have applauded the contributions of the Reserve Component Noncommissioned Officer Education System (RCNCOES) to the improved leadership posture of our NCO corps. Success of the program is such that approximately 30,000 students are expected to graduate in FY 85. Estimates are that approximately 35,000 students will graduate from RCNCOES courses in FY 86, more than five times the number that graduated in FY 80, the year the program was implemented. RCNCOES training is devoted primarily to leadership skills.

Our RCNCOES program includes the Primary, Basic, Advanced and Senior Noncommissioned Officer (NCO) Courses and the Reserve Component First Sergeants Course. Commencing in FY 85, the Reserve Component Primary Leadership Development Course (RCPLDC) will replace the Primary and Basic NCO courses. These NCO Schools will train nearly 15,000 students during FY 86 and will complement the NCO training of the State Military Academies, projected to train approximately 25,000 students next year.

All of our personnel must be prepared to meet the same battle tests as infantrymen. The Army National Guard Battle Skills Course is designed to provide instruction in the technical aspects of squad and platoon weapons, their tactical employment, live fire familiarization and planning the use of nonorganic supporting weapons. The training, initiated in FY 84, is designed to complement the train-to-train skills taught in the RCNCOES.

Another specialized training course initiated in the Army National Guard during FY 84 is the Reserve Component Tank Commanders Course. The purpose of this course is to prepare our NCOs for the duty position of Tank Commander in a Tank Company or Troop. Students are trained to instruct crew drills and teach basic skills to their crews. The Tank Commanders Course is taught at Gowen Field, Boise, Idaho and will train over 800 Army National Guard tankers during FY 86. Like the Guard's Battle Skills Course, this course fits the needs of Guardmembers with limited time to devote to their military duties.

In order to ensure that the Active Guard/Reserve (AGR) force meets the same professional standards as their active Army counterparts, we have developed the Military Education Program (MEP). In most instances, MEP requires that AGR personnel attend the same courses conducted by the active Army at an appropriate time in their AGR career. Continued service in the AGR program is predicated upon successful completion of MEP. Equally important is active participation in the MEP by our military technicians. This will enhance their ability to perform in both their military and technician capacities.

ARMY NATIONAL GUARD AVIATION

Current aviation training efforts have been greatly improved by the FY 83 activation of the Eastern Army National Guard Aviation Training Site (EAATS). Developed to handle the increased training work load in qualifying our aviators to meet individual and crew requirements, EAATS is designed to complement current training programs, not to replace them. A second aviation training site, the Western Army National Guard Aviation Training Site, is scheduled to be operational by FY 87. Its mission will be to supplement unit tactical training requirements.

We have established an intensive night vision goggle (NVG) training program to meet aviation mission requirements. This training requires not only specific flight training but specialized equipment. The Aviator's Night Vision Imaging System (ANVIS) has been designed to help the aviator meet this essential mission requirement. It is necessary for the Army National Guard to receive ANVIS in the near future for its aviation units for increased operational capability, cockpit compatibility, safety and reliability.

We have experienced an increase in Undergraduate Pilot Training (UPT) quotas from 140 in FY 82 to 237 in FY 84, utilizing all UPT quotas during FY 84. These quotas will increase during the 1980s and will eventually provide an output of 250 Army Guard aviators per year by FY 89. We have seen positive results over the past three years since imposing a restriction of 27 1/2 years of age to apply for Initial Entry Flight School. The tradeoff for our highly experienced force of aviators is its steadily increasing average age. Our program is solving the "Aging Aviator" problem and establishes a 20-year life-cycle aviator management program.

ARMY GUARD SAFETY

The Army National Guard aviation accident rate increased from 2.00 accidents per 100,000 flying hours in FY 83 to 2.58 in FY 84. Human error on the part of commanders, supervisors, maintenance personnel, and aircrews continued to be the major factor in these accidents. Individual accountability at all levels, intensive management of aviation safety school quotas, and a quarterly aircraft accident review and trend analysis videotape are major elements in the countermeasure program developed to combat this rise in aircraft accidents.

Through an intensive Army National Guard countermeasure program, we experienced an 18 percent reduction in Army motor vehicle accidents from FY 83. The FY 84 rate was 1.44 accidents per one million miles of exposure. Fatalities were reduced by more than 50 percent. Non-fatal accidents from other than Army motor vehicles were also reduced by 13 percent. To continue an aggressive accident prevention program designed to further reduce personal injury and property damage, we have developed a unit safety officer/NCO training course to be fielded during FY 85.

ARMY GUARD TRAINING SUPPORT

Among our greatest training inhibitors has always been an inability to get full benefit from Inactive Duty Training (weekend training assembly periods). We have attacked that problem through training support. This support is designed to enhance our available training time by making ranges, local training areas and armories more effective as training centers through modernization and employment of training devices and simulators.

To maintain our mission readiness through training, the full support of training devices and simulators is essential. This is especially true in light of the unprecedented integration of modern weapon systems and increased constraints on human and materiel resources. The FY 86 budget reflects a $53 million commitment by Department of Army to provide the Army Guard technologically advanced training devices. Procurement of 181 platoon sets of the Multiple Integrated Laser Engagement System (MILES) is programmed. This will provide one set per battalion to each of our maneuver battalions. Two devices designed for use in armories are planned for delivery in FY 86; 103 Tank Gunnery and Missile Trainer Systems (TGMTS) and 252 Video Disc Integrated Gunnery Systems (VIGS) will be fielded to armor units. Additional devices such as Dragon Launch Effects Simulators, Stinger Launch Effects Simulators, maintenance trainers and chemical detector trainers are programmed for delivery to the Army Guard as part of the $53 million package.

We are developing a training device initiative entitled "Guard Unit Armory Device Full-Crew Interactive Simulation Trainer (GUARDFIST)." This incorporates the interlocking training strategy of conducting full crew training at the garrison and local training area with a high technology training device that takes advantage of interactive video capability. It is anticipated that this device will keep up with future technology and be used into the 21st century. Current initiatives are aimed at armor and artillery crews, dubbed GUARDFIST I and II, respectively.

Another effort to improve Inactive Duty Training effectiveness involves upgrading and expanding local training areas to offer the best opportunity for tactical training close to home. It is designed to maximize time, fuel and ammunition, but reduce wear and tear on equipment. It provides effective, economical training in peacetime and permits us to achieve our training standards while better utilizing time and resources.

Establishment of Army National Guard Regional Training Centers (RTC) in densely populated areas would further enhance increased levels of training and maximize efficient utilization of training resources. The Ft. Dix, New Jersey RTC is a prototype facility, programmed for construction in FY 86, that will provide a multipurpose unit training location. The RTC will help sustain soldier skills and develop the crew, squad and platoon proficiency required to operate the newest of the Army's weapon and maintenance systems. It will also incorporate high technology training devices on hand and those currently being developed to train combat, combat support and combat service support personnel and units. The center will be flexible enough to accommodate future improvements in state-of-the-art training devices.

Studies have recommended establishment of Regional Maintenance Training Sites (RMTS) to provide maintenance MOS skill transition and sustainment training during peacetime. This training will enable the mobilization and deployment of RC maintenance companies capable of supporting current and force modernization systems. The Army National Guard has been assigned proponency for fourteen sites which will be collocated with Mobilization and Training Equipment Sites/Unit Training Equipment Sites. The first two RMTSs will be operational during FY 86.

Our hospital units currently train with limited amounts of inadequate equipment, different from that which they would be expected to use upon mobilization. Establishment of Army National Guard Medical Regional Training Sites is one solution to the problem, and essential if our hospital units are to have access to medical equipment sets currently being procured for them. Each Army Guard Medical Regional Training Site would provide storage, maintenance and collective training support for one complete set of modern field hospital equipment. Units would utilize the equipment to conduct section and unit training in a field environment during annual training and could move it to their armories for training during weekend training assemblies. By establishing Army National Guard Medical Regional Training Sites, individual soldier skills and unit training will be markedly improved, thus enhancing the readiness of our sixteen hospital units. Funding of four sites has been proposed, with the first being constructed in FY 87 and becoming operational in FY 88.

AIR GUARD TRAINING SUPPORT

Our flying units make significant contributions to the Air Force as a by-product of realistic training. We participate as full partners with other components in overseas deployments, Joint Chiefs of Staff and Air Force training exercises and Air Guard sponsored Composite Force Training exercises.

Our overseas deployments temporarily move entire flying units to theater locations along with ground support personnel, civil engineering, tactical control and combat communication units. Such deployments furnish the Air Guard with realistic and valuable theater specific training.

The Air National Guard has tested several deployment concepts in order to validate wartime capabilities and maximize training dollars spent. For example, we recognize that air refueling assets will be extremely limited during wartime. Therefore, we continue to use an island-hopping deployment concept, moving a squadron from the Continental United States to Europe without air refueling. We successfully conducted such a deployment in FY 84, when we moved 12 A-7s from Michigan to Italy without air refueling. We believe this type of deployment is extremely important, considering the likelihood of limited aerial refueling during contingency operations.

In FY 84, the Strategic Air Command specifically requested support from tanker units that had been equipped with the new JT-3D engine. The improved performance capability of the reengined aircraft allows operation from shorter runways, which are typical in the European theater. The reengined KC-135 can also carry (and offload during air refueling) more fuel over longer distances; in several cases, one reengined KC-135 replaced two older model tankers in refueling fighter aircraft deploying to overseas locations. I thank the Congress for their support over the last few years in providing the necessary funding to allow us to complete the KC-135 reengining program.

In the Southern Command region, the Air Guard maintains four A-7s on station at all times in defense of the Panama Canal. Our A-7s are supported by reengined Air Guard KC-135s, which we now use for these missions instead of the C-130. These reengined tankers allow us to not only perform aerial refueling, but also to move more personnel and equipment than with the C-130. We also maintain two Aircraft Control and Warning Radar units in defense of Puerto Rico, and we support airlift requirements throughout Central and South America with six C-130 aircraft, a mission we share with the Air Force Reserve.

In the past year, Air National Guard Tactical Airlift units provided support for 370 missions to Joint Airborne/Air Transportability Training (JA/ATT), an interservice program for the wartime application of airlift. In this program, the various services and the Air Guard jointly develop common procedures for combat operations in order to attain and maintain wartime readiness.

The Air National Guard also supports the Army in exercises throughout the world. Joint training programs, such as at the National Training Center, Fort Irwin, California, provide joint training experience for both the Army and the Air National Guard.

To further the ANG fighting capability and familiarize our Air Guard personnel with joint operations, Composite Force Training exercises are conducted throughout the year. These exercises are sponsored and planned by Air Guard flying units, Permanent Field Training Sites and active Air Force units. These exercises encompass all mission areas of the Air Guard and are developed for the specific purpose of providing realistic training for all participants.

As a further measure of the Air National Guard's global readiness and realistic training received, 12 Tactical Fighter and Reconnaissance units participated in eight overseas deployments to Germany, Norway, Italy, Turkey, England and Hawaii in FY 84. Three of these deployments were joint deployments where two or more units deployed together. This approach has reduced airlift costs, since the units share equipment and resources. Fourteen Fighter/Reconnaissance units are scheduled to participate in nine overseas deployments in FY 85.

Also in FY 84, two Air National Guard Air Defense units deployed with an active Air Force unit to Iceland to provide air defense coverage of the North Atlantic. During the course of the four-week deployment, Air Guard interceptors responded to 22 air defense active air scrambles and intercepted seven Soviet Long Range Bear bombers. Air National Guard RF-4s also fly real-time special reconnaissance missions to provide intelligence of certain sensitive areas.

In recognition of the increasing importance of electronics combat, the Air National Guard has developed a long-term project to design, build and employ low-cost electronic warfare simulators. These simple, but effective, radar transmitting devices were deployed to Air National Guard gunnery ranges throughout the United States and were used in large-scale exercises in support of readiness training for both Air Guard and U.S. Navy and Marine Corps aviators.

As a final example of our contribution to the Total Force and our nation, The Director of the Air Guard recently had the honor of pinning astronaut wings on two Air Guard members. We currently have four astronauts, three of whom are Air Guard pilots and one who is a weapon systems officer. The three pilots have been on Space Shuttle flights, and the weapon systems officer will be on an upcoming flight. These professional airmen represent the high caliber and commitment of all of our over 105,000 Air Guard men and women. The nation can be proud of their dedication to readiness and willingness to serve as members of the modern militia. They are truly Americans at their best.

READYING/MOBILIZING THE ARMY GUARD

We experienced an overall readiness decline of two percent for FY 84. Although military occupational skill qualification, available personnel and training readiness ratings improved, equipment on hand readiness fell two percent, causing the overall decline. We are in a dynamic period. More high priority missions are being assigned to the Army National Guard, which causes changes in the force structure and implementation of force modernization programs to ready the force to meet these new challenges. Although all readiness factors are affected by this change, the greatest impact is in the area of equipment on hand.

The readiness rating provided from unit status report data is only one of many indicators of total mission capability, others being modernization, force structure and sustainability. As the Army National Guard replaces old items of equipment with new ones, unit capability is increased. However, there is no current system to measure and report these capability increases. For example, an armor unit which receives the new M-1 tank may not change its readiness condition; however, its fighting capability has expanded significantly. We are working with the Active Army to develop such a measuring tool.

The ability to rapidly mobilize our forces and effectively move them to planned locations remains a matter of serious concern to us. Training of our mobilization planners is now a reality, with the initiation of the needed Mobilization Planners Training Course. This course will fill an obvious void in our planning effort and will produce more functional plans by ensuring that thoroughly knowledgeable planners are in the program.

We will continue increasing the number of units that participate in mobilization exercises. Our goal for FY 85 is to evaluate 100 percent of units selected for FY 85 Overseas Deployment Training by conducting

Mobilization and Deployment Readiness Exercises. That goal should be achievable, and has been reestablished for FY 86.

In FY 84, more than 450 mobilization exercises were conducted and more than 500 are planned for FY 85. Although these exercises are a successful means of evaluating our mobilization preparedness, funding is available only for early deploying units. Therefore, we are currently unable to evaluate over 60 percent of our combat divisions, 50 percent of separate brigades and 100 percent of armored cavalry regiments.

READYING/MOBILIZING THE AIR GUARD

I am proud to report that again in 1984, Air National Guard units successfully demonstrated their capability to perform their wartime mission during Operational Readiness Inspections. These inspections are conducted using realistic wartime scenarios that inject stress and require unit commanders and staff to make decisions that closely approximate what would or could be done in an actual wartime environment. The majority of Air National Guard units, including Flying, Combat Communications and Ground Tactical Air Control units, now deploy from their home stations to Air Guard Field Training Sites and other locations for their inspections. These deployments accentuate mobility, training and experience in unit operations in unfamiliar environments and have materially enhanced unit readiness and capability.

FAMILY AND EMPLOYER SUPPORT

The families, employers and the American public in general must understand that the National Guard carries a major portion of the defense of this nation. Increased participation in National Training Center rotations, JCS exercises and overseas deployment training serve as examples of expanded training required of many units. Our personnel often find it necessary to train beyond the normal two-week annual training period and forty-eight training assemblies per year. As a result, the potential exists to strain family and employer relationships. Acknowledgment of the moral support of families and economic support of employers during these extended training periods must, therefore, be made. The role of the National Guard in the defense of this nation is increasing, and the continued support and understanding of families and employers toward the citizen-soldier is vital to the success of that effort.

ARMY GUARD SUMMARY

Leadership is the Army theme for 1985. Army National Guard leadership must exercise a high degree of motivation and sensitivity to strike a balance between the military requirements and civilian obligations placed on our citizen-soldiers. This is especially important in light of the increased reliance being placed on the Guard for National Security and the effect this could have on every aspect of each soldier's life. Our leadership, at every echelon, must set an example of military professionalism to be emulated by all who serve within our sphere of authority. The exercise of leadership by Army National Guard officials must take the form of providing sound management and enthusiastic support of those programs designed to protect our nation and people.

Our role in the Total Force is vital to our nation's defense. The overall picture for the Army National Guard through the remainder of the decade is a positive one. We have achieved goals beyond our expectations. There is a great deal yet to be accomplished, but I believe we are equal to the challenges ahead, for only with new challenges can we continue to grow and strengthen.

AIR GUARD SUMMARY

The Air National Guard has proven to be an integral part of the Total Force. The Air Guard exists to support U.S. foreign policy and national security objectives, while providing a state militia uniquely qualified for local disaster and public safety missions. Our responsibilities are truly global, national and local, and each offers its own set of challenges for the future.

The Air National Guard is ready to meet these challenges. The capability of our citizen airmen to respond to the most demanding wartime missions is a matter of record. We appreciate the continuing strong support of the Congress. That support has permitted the Air National Guard to continue modernization and to make significant progress toward our goal of strength through readiness.

BIOGRAPHY OF LT. GEN. EMMETT H. WALKER, JR.

Lieutenant General Walker enlisted in the United States Army in December 1942, attended Officer Candidate School at Ft Benning, GA, and was commissioned a second lieutenant, Infantry, on 23 May 1944. He served with the 95th Infantry Division in the European Theater during World War II and was separated from active service in March 1946.

On 22 May 1949, General Walker joined the Mississippi Army National Guard as a first lieutenant. He was promoted to captain on 3 January 1951.

General Walker was ordered to active duty on 16 January 1951 with the 31st Infantry (Dixie) Division during the Korean Conflict and served with the Far East Command Headquarters in Japan until 25 September 1952.

General Walker returned to the Mississippi Army National Guard where he served in several positions. Promotion to major came in February 1955. In December 1961, General Walker was promoted to lieutenant colonel and took command of the 4th Howitzer Battalion, 114th Field Artillery. He became commander of the 631st Artillery Group and was promoted to colonel on 19 February 1968. Appointed Assistant Adjutant General for the Mississippi Army National Guard on 16 February 1972, he was federally recognized as brigadier general, Adjutant General Corps, on 4 August 1972.

General Walker was appointed brigadier general, Army of the United States, on 15 October 1976 and ordered to active duty as Special Assistant to the Director, Army National Guard, National Guard Bureau. He was reassigned as Deputy Director, Army National Guard, National Guard Bureau, and federally recognized as brigadier general of the line effective 17 November 1976.

He was appointed as Director of the Army National Guard on 16 August 1978 and promoted to the grade of major general on 22 August 1978. He was appointed by the President for a four-year term as Chief of the National Guard Bureau and promoted to lieutenant general on 19 August 1982.

General Walker has been awarded the Silver Star, Legion of Merit, Bronze Star with V Device, Meritorious Service Medal, Army Commendation Medal, Good Conduct Medal, and numerous other decorations.

AIR NATIONAL GUARD

STATEMENT OF MAJ. GEN. JOHN B. CONAWAY, U.S. AIR FORCE, DIRECTOR, AIR NATIONAL GUARD

PROGRESS IN READINESS AND MODERNIZATION

Senator RUDMAN. Do the gentlemen with you have comments? If so, General Conaway.

General CONAWAY. Thank you, Mr. Chairman.

On behalf of the Air National Guard, I appreciate the strong support of this committee and Congress that has helped the Air Guard attain our highest state of combat readiness and highest state of modernization.

We are manned at over 106,000 today, will be going to 108,000 the end of the fiscal year, and to 111,000 personnel for fiscal 1986. This is all tied to growth of missions, conversions to C-5's and C-141's and more F-15's and F-16's coming in the Air Guard.

Obviously, the whole answer is not new equipment. There is not enough new equipment to go around. We are having to enhance some of our existing equipment. This Committee has been very good in helping us to enhance our equipment, such as reengining our KC-135's. We have 99 of our KC-135's reengined with the JT-3D engine.

The Air Force and Department of Defense, Secretary Webb's office, is assisting us greatly in enhancing some of our F-4's with the 10 mil bombing system.

We are tasked in the Air Guard to do more and more. Our share of the role in ADTAC alerts in the United States is over 70 percent of the total. We participate in rotations overseas, increased day-to-day training in our fighting units and we have some major locations in Kansas, Arizona, Idaho, and Oregon where we perform flying training. This does take some full-time resources.

PERSONNEL INCREASE

We are asking for an increase of 1,200 full-time personnel a combination of technicians and AGR's. We certainly need them to handle the additional airplanes and training missions that we have as we have over 1,700 combat aircraft in the Air National Guard next year.

Today the No. 1 weapon system in the Air Guard is the F-4. We have 700 of the Phantoms, 326 A-7's, plus tankers and F-15's and F-16's that are coming in. The older aircraft need to be modernized or enhanced.

We hope you appreciate it is cost effective to increase our capability with the combination of enhancements and new aircraft.

I do appreciate your support of our full-time manning that we need.

I stand ready to answer any questions you may have.

[The statement of General Conaway follows:]

STATEMENT OF MAJ. GEN. JOHN B. CONWAY

Mr. Chairman and members of the Committtee, it is my pleasure to report to you on the current status of the Air National Guard. We continue to make steady progress in improving the readiness and capability of our 91 flying units and 244 mission support units. We are extremely happy to be back in the strategic airlift business with activation of our first C-5 and C-141 units at Stewart Airport, New York and Jackson, Mississippi. We have significantly expanded our capabilities in the tactical fighter arena with conversion of our New Orleans unit to first line F-15 aircraft, probably the best overall air superiority fighter in the world today. Our South Carolina F-16 unit, the first in the Air Guard, will have some competition as we activate our second F-16 unit at Kelly Air Force Base, Texas. More F-16 conversions are programmed in the outyears. Over the next few years, we will continue modernizing our flying forces with eventual retirement of the F-106 and older F-4s. With the help of the Congress, we also have been able to replace some of our aging C-130 aircraft with new production C-130Hs and we have made a significant start in modernizing our tactical communications equipment.

We have modified our A-7 aircraft with state of the art forward looking infrared radar (FLIR) and have installed smokeless engines on some of our F-4 aircraft to reduce their visibility in combat situations. Installation of the off-boresight for the AIM-9 L/M missile has also greatly enhanced the capability of our F-4s. We are very proud of our newly reengined KC-135 tankers. The reengining will be completed this year and the new JT-3D engine will allow us to carry more fuel over longer distances. In several instances, one reengined tanker did the job of two older models in refueling fighter aircraft deploying overseas. In addition, the reengined tanker can carry personnel and equipment, thus freeing previously used C-130s for other taskings. I once again thank the Congress for their support of this program over the last few years.

We have seen an increase in overall manning from approximately 93,400 at the end of FY 1979 to a little over 105,000 at the end of FY 1984. We are programmed to go to almost 108,000 this year and to almost 110,900 in FY 1986. This growth will take us from 95.7 percent of wartime requirements in the beginning of the 1980's to 99.2 percent at the end of FY 1986 even though wartime requirements have grown by 14,150 over the same period.

We have significantly expanded the simulated wartime training activities of our flying and mission support units. We have increased participation in Joint Chiefs of Staff exercises, overseas deployments, and joint training exercises with Air Force and other service units.

As a result, I can report that the readiness of the Air National Guard is at the highest overall level in its history. However, we do continue to have problem areas.

The average age of our fleet of over 1,600 aircraft is now 17 years. We have made significant improvement in obtaining support equipment but have a long way to go to fully update our tactical communications gear. Any improvement in equipment readiness will depend directly on Congressional support for Air Force procurement requests.

With procurement levels limited by available resources, we need to continue to improve the mission capability of our current weapon systems through modifications such as the FLIR, AIM-9L/M and low smoke engine programs which I mentioned earlier. Some of the additional modifications we are looking at include a 10 MIL bombing system, a digital inertial navigation system and an ADTAC radar for our F-4s.

While our manning level has improved, we are short in many critical mission skills. However, the bonus/incentive program has helped to reduce our shortfall and we are confident our targeted recruiting efforts will prove successful. Also, the new G.I. Bill which will be effective on July 1, 1985 should be extremely beneficial in attracting people to the Air Guard.

In reviewing the mix of active and reserve forces, I feel the Air Force has achieved a well balanced mix. The primary mission of the Air National Guard should continue to be to provide properly equipped and trained units for mobilization whenever called upon in time of crisis. As evidenced by increased readiness and exercise participation, our flying and mission support units stand ready to respond in any mission area whenever needed.

As more modern aircraft and equipment become available, robusting of some of our current units will continue to provide increased capability at relatively low cost.

Establishment of new combat flying units in the Air National Guard, rather than robusting, would not add more overall capability nor be more cost effective.

Transfer of active Air Force missions with high levels of peacetime activity would neither fit the basic mission of the Guard nor result in any significant economy of operations. We are better able to take advantage of available local manpower resources and lower costs of peacetime operation when we are training to provide a true mobilization force.

As a final example of our contribution to the Total Force, I am extremely pleased to tell you that we have four astronauts who are in the Air Guard. Three have been on Space Shuttle flights and the fourth will be on an upcoming flight. These professionals represent the high caliber of our people. We can all be proud of their dedication to serve as members of the modern militia.

OPERATION AND MAINTENANCE BUDGET REQUIREMENTS

Operation and Maintenance funds are a key ingredient of force readiness. These funds are used to buy aviation fuel and flying hour supplies, perform depot maintenance on weapon systems and their components, maintain facilities, and pay civilians.

The following table shows the Operation and Maintenance, Air National Guard funding data for FY 1984-86.

($ In Millions)

Budget Activity	FY 1984	FY 1985	FY 1986
Mission Forces	$1,291.5	$1,343.6	$1,346.2
Depot Maintenance	404.2	362.8	362.5
Other Support	105.0	122.4	121.4
TOTAL	$1,800.7	$1,828.8	$1,830.1

The Air National Guard Operation and Maintenance request for FY 1986 increases by $1.3 million. This increase provides about 2 percent real growth over FY 1985 and is required to support the Air Guard's readiness and training requirements as weapon systems modernization continues in FY 1986.

Mission Forces. This budget activity funds our flying and mission support operations. The $2.6 million increase in the FY 1986 budget request represents a $31.6 million increase in program and $29.0 million decrease in prices. The program growth is primarily for aviation fuel and supplies to support a growth of 10,799 flying hours as well as maintenance and supply support for the Air Guard's new strategic airlift missions at Stewart Airport, New York and Jackson, Mississippi and new tactical fighter conversions at Kelly, AFB, Texas, and New Orleans, Louisiana.

Depot Maintenance. This budget activity finances the centralized maintenance and modification of aircraft, engines, other major equipment, and exchangeable subassemblies and components that are repaired or modernized at the Air Logistics Centers. The FY 1986 request is $.3 million below the FY 1985 level. This decrease represents a $5.5 million decline in prices and an increase of $5.2 million in program. The increase in program consists of $22.4 million programmed for depot maintenance on C-130 and F-4D aircraft partially offset by a $17.2 million reduction from FY 1985 for the one-time Congressional add-on for reengining KC-135 aircraft with the JT-3D engine.

Other Support. This budget activity funds for our operational support aircraft flying operations, operating costs of the National Guard Bureau Air Directorate, Real Property Maintenance, and Base Operating Support for the eight bases at which the Air National Guard is single manager. The $1.0 million decrease for FY 1986 is primarily in price growth.

MILITARY PERSONNEL BUDGET REQUIREMENTS

Military Personnel funding provides for the pay, allowances, clothing, subsistence, and other expenses of Air National Guard members.

The following table shows the National Guard Personnel, Air Force funding data for FY 1984-86:

Budget Activity	FY 1984	FY 1985	FY 1986
	($ In Millions)		
Unit and Individual Training	$ 334.6	$ 527.0	$ 557.4
Other Training and Support	243.3	365.3	437.7
TOTAL	$ 577.9	$ 892.3	$ 995.1

The Air National Guard's FY 1986 Military Personnel budget request increases $102.8 million. This increase provides approximately 8 percent real growth over FY 1985. FY 1984 costs do not include retired pay accrual. I would like to summarize the more significant elements of the program and the associated costs.

Unit and Individual Training. This budget program finances those personnel on inactive duty who annually perform 15 days of active duty training, 48 inactive duty drill periods, and additional flying training periods (Pay Group A). It also includes basic training for non-prior service enlisted personnel as well as their follow-up training at either home station or formal Air Force technical schools (Pay Group F). Lastly, it includes funding for the pay of high school graduates and seniors who are awaiting entry into basic training (Pay Group P).

The FY 1986 budget request for Unit and Individual Training increases by $30.4 million. This increase consists of $14.1 million in program growth and $16.3 million in price growth. Approximately $10.0 million is required to support drill strength growth in FY 1986. The strength increase supports force structure changes, additional communications personnel, A-7 munitions, medical requirements, the Prime RIBS mission, increased officer manning, and other new equipment and missions assigned to the Air National Guard. The remaining $4.1 million is for retired pay accrual associated with program growth.

Other Training and Support. This budget program includes formal schooling of our Guardsmen; special training tours of active duty other than those covered in Unit and Individual Training; pay, allowances, and other expenses for Guardsmen on full-time active duty; other costs such as enlistment, reenlistment, educational assistance, selective affiliation bonuses, disability and survivor benefits, and the student loan repayment program.

The FY 1986 budget request for this category increases by $72.4 million above FY 1985. Program growth is $58.6 million, while price growth is $13.8 million. Approximately $23.7 million supports weapon system conversions, authorized aircraft and equipment changes, active Air Force mission requirements and other direct unit support increases. Annualization of the new educational benefits program to be implemented on 1 July 1985 will require $12.3 million in FY 1986. Another $11.7 million will be required to support retired pay accrual associated with program growth in this budget category. Increased training requirements total approximately $8.5 million. The remainder is for minor program changes.

SUMMARY

The Air National Guard has proven to be an integral part of the Total Force. The Air Guard exists to support U.S. foreign policy and national security objectives, while providing a State militia uniquely qualified for local disaster and public safety missions. Our responsibilities are truly global, national, and local, and each offers its own set of challenges for the future.

The Air National Guard is ready to meet these challenges. The capability of our citizen airmen to respond to the most demanding wartime missions is a matter of record. We appreciate the continuing strong support of the Congress. That support has permitted the Air National Guard to continue modernization and to make significant progress toward our goal of strength through readiness.

Mr. Chairman, this concludes my prepared statement. I will be happy to respond to any questions you may have.

ARMY RESERVE

STATEMENT OF MAJ. GEN. WILLIAM R. BERKMAN, U.S. ARMY, CHIEF, ARMY RESERVE

STATUS OF AMERICA'S CITIZEN SOLDIER

General BERKMAN. I am pleased to be here today on behalf of more than half a million citizen-soldiers, men and women who are contributing to our national security as members of the Army Reserve.

Today's Army Reserve is the best Army Reserve our Nation has ever had. It is more ready and better trained than it has ever been. It is better equipped, better led and better managed than ever before.

The Army Reserve constitutes almost 40 percent of the Army's combat support and combat service support structure, 20 percent of the Army's general support structure, over 16 percent of the nondivision's combat and special theater force structure as well as important elements in our division combat structure, in addition to the troop program units, the individual ready reserve and the Army's pool of pretrained personnel.

In 1984 there were 255,000 drilling reservists assigned to troop program units in the Army Reserve. That number will go to 263,000 by the end of 1985, 73,000 more than that number in 1979.

BUDGET PROGRAM INCREASES

The President's budget request will provide an increase in fiscal year 1986 of 9,400 paid drill strength and 4,000 reservists on full-time duty in the active Guard and Reserve programs.

The growth in paid drill strength continues to close the gap between peacetime end strength and wartime requirements to about 20,000.

INCENTIVES TO ATTRACT TOP PERSONNEL

Army Reserve is attracting high quality young men and women. In 1984, 82 percent of the nonprior Service enlistees were high school diploma graduates; 4 years ago that was 48 percent. High school diploma graduates, incidentally, tend to have a better retention potential than their nongraduate counterparts.

To attract high quality men and women to the Army Reserve, we offer a variety of incentives. Important are those in the Selective Reserve incentive bonus program and new reserve component education benefits program. The bonus program provides a variable bonus to persons enlisting in the Army Reserve and target critical mobilization skills and high priority units.

Experience has always demonstrated that those enlisting with the bonus remain in the Army Reserve longer than those who do not.

Continuation and expansion of the Selected Reserve incentive program is essential if we are to meet our Selected Reserve enlistment goals for 1985 of about 70,000 and for fiscal year 1986 of 75,000.

EDUCATION BENEFITS PROGRAM

The education benefits program is also expected to have a significant impact upon the Army Reserve. The program entitles all high school graduate reservists who enlist or extend for a 6-year period to up to $140 a month for college or college equivalent study for a total of over $5,000.

This should increase the number of young people interested in the Reserve Service.

I want to emphasize also with General Walker these two programs are both important. Neither one is an effective substitute for the other. They are aimed at different groups of people and have different objectives. They are both needed.

AREAS OF GROWTH

One of the major areas of growth in the 1986 budget and beyond is the active Guard and Reserve programs. The 1986 budget increased AGR strength by more than 4,000 personnel to almost 15,000. Army Reserve AGR personnel on full-time duty in units assist drilling reservists in meeting their readiness goals.

Some AGR personnel serve in assignments above the unit level. The great majority, 63 percent in 1985, 81 percent in fiscal year 1990 will serve in Army Reserve units in which they would mobilize and deploy.

They assist in training, administration, maintenance and logistics Their contributions are vital to readiness improvement.

SUPPORT PERSONNEL

Incidentally, historically the Army Reserve has had the lowest percentage of full-time unit support personnel of the reserve components of any Service. In fiscal year 1982 the full-time support personnel, including the AGR and civilian military technicians and active component soldiers, represented only 4.4 percent. The 1986 budget request will increase full-time unit support to 6.7 percent.

The Individual Ready Reserve is the Army's primary source of pretrained military personnel. That has grown from 213,000 in 1981 to an anticipated fiscal year 1985 end strength by about 286,000.

By the end of fiscal year 1990 the IRR will number more than 372,000, largely as a result of the increased military service obligation of 2 years.

INDIVIDUAL READY RESERVE (IRR)

Individual Ready Reserve personnel will be required upon mobilization to bring Active and Reserve component units of the Army up to wartime strength, serve as replacements until inductees can be trained and cadres formed after mobilization.

A number of initiatives are underway with respect to IRR. Secretary Webb has alluded to some of them. One is development of the comprehensive training strategy for the IRR to maintain skills and also to increase skills and critical MOS'.

Also efforts are underway, to reenlist members of the IRR to improve IRR management and training and to assure location information on each IRR member is current. The management of the IRR is accomplished by the Army Reserve Personnel Center which was activated a year ago as a field operating agency of the Office of the Chief, Army Reserve.

In conclusion, I would like to say that the Army Reserve has become an essential element of the total Army which provides the manpower our Nation requires to deter war and protect our national interest.

Winston Churchill once said a reservist is twice a citizen. More than half a million men and women of the Army Reserve are proud of that status. They will, with your help, continue to be proud and ready to meet the challenges of tomorrow.

We thank you for your continuing support and attention.

Thank you, Mr. Chairman.

[The statement of General Berkman follows:]

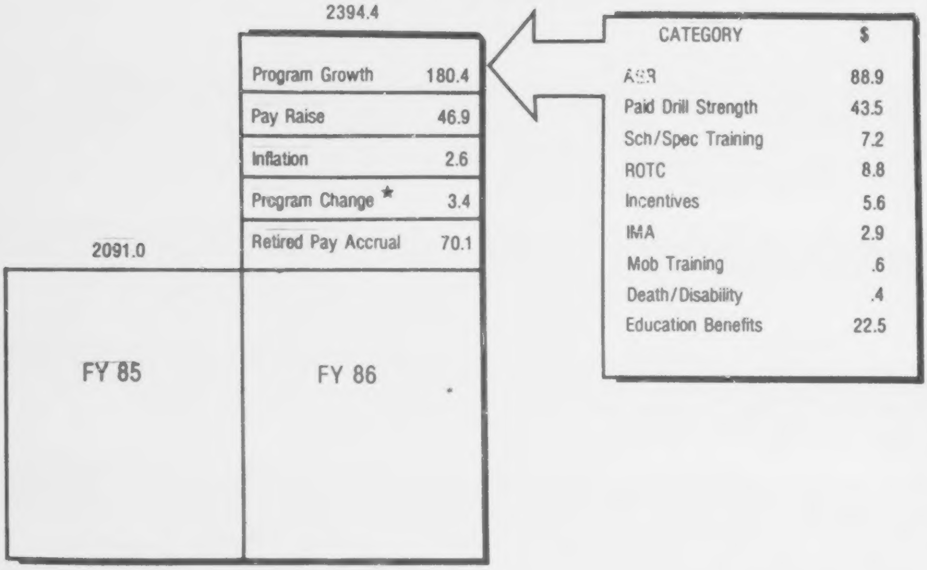
STATEMENT OF MAJ. GEN. WILLIAM R. BERKMAN

Mr. Chairman and members of the committee, I am pleased to be here today to talk with you about the United States Army Reserve and its budget request for fiscal year 1986.

RESERVE PERSONNEL, ARMY

The total Reserve Personnel, Army (RPA) budget request for FY 1986 is for $2.4 billion. The increase of $303 million over FY 1985 consists of program growth, pay raise, retired pay accrual, and inflation. Actual direct program growth for FY 1986 is about $180 million, or about 7.5 percent of the total FY 1986 appropriation request.

RESERVE PERSONNEL, ARMY ANALYSIS OF CHANGE ($ Millions)



★ Issue of New Female JROTC Uniform.

The FY 1986 budget request directly supports the training and administration of members of the Army's Ready Reserve as well as the Reserve Officers' Training Corps (ROTC) Program, the Health Professions Scholarship Program, the Chaplain Candidate Program, and attendance at basic officers' branch courses.

RESERVE PERSONNEL, ARMY ($ IN MILLIONS)

	FY 84	FY 85	FY 86
TROOP PROGRAM UNIT, PAY GROUP A	638.1	980.0	1,037.1
INIT ACTIVE DUTY TNG (IADT), PAY GROUP F	125.3	201.0	240.6
MEMB AWAITING IADT, PAY GROUP P	2.1	2.8	3.4

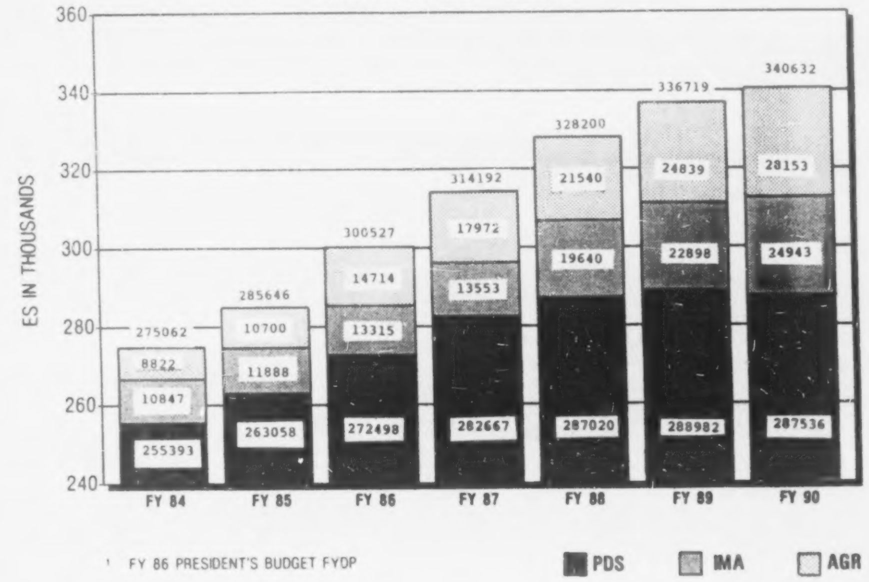
	FY 84	FY 85	FY 86
INDIV MOB AUGMENTEES, PAY GROUP D	14.6	32.4	37.0
SCHOOL TRAINING	53.2	114.7	127.6
SPECIAL TRAINING	65.6	108.7	110.8
MOB TRAINING	57.4	109.6	113.0
ADMIN/SUPPORT	276.6	430.0	576.8
AGR	(253.4)	(391.3)	(532.0)
INCENTIVES	(19.1)	(33.5)	(39.2)
DEATH/DISABILITY	(4.1)	(5.2)	(5.6)
EDUCATION BENEFITS	0	3.3	25.7
ROTC/HPSP	89.1	108.5	122.4
TOTAL	**1,322.0**	**2,091.0**	**2,394.4**
RETIRED PAY ACCRUAL INCLUDED	(0)	(531.7)	(601.9)

Paid Drill Strength

The number of Army Reservists assigned to troop program units (paid drill strength) continues to improve. At the end of FY 1978, Army Reserve paid drill strength stood at a discouraging low of 186,000. Since that time, however, due in good measure to the foresight and support of the Congress in the form of increased Reserve end strength authorizations and a wide variety of funded strength incentives such as bonuses and educational assistance, paid drill strength has steadily grown to 255,000 as of 30 September 1984. By the end of FY 1985, paid drill end strength is programmed to reach 263,000. The FY 1986, budget requests a paid drill end strength of 272,498, a goal still approximately 1,000 personnel short of the peacetime requirement, and nearly 20,000 short of the wartime required strength. Personnel strength has improved significantly in recent years and continues to improve. Support for further improvement is required.

U.S. ARMY RESERVE

SELECTED RESERVE STRENGTH [1]



[1] FY 86 PRESIDENT'S BUDGET FYDP

Individual Ready Reserve (IRR)

The IRR, the Army's source of wartime individual replacement and filler personnel for both Active and Reserve Component units, and cadre for units formed after mobilization continues to grow in numbers. From its post-Vietnam low of about 149,000 in FY 1977, the IRR's strength posture has improved steadily. As of 30 September 1984, the enlisted strength of the IRR stood at about 235,000. A substantial improvement in these figures is expected as a result of the recent authority to extend the minimum service obligation from six to eight years.

Moreover, the FY 1986 budget request provides for an expansion of the IRR reenlistment bonus program from the FY 1985 level of 10,000 to 12,000 initial bonuses to further enhance growth in IRR membership. The FY 1986 budget request will increase mobilization skill training for nonunit Reservists by about one percent over FY 85.

Strength Incentive Programs

The FY 1986 budget request provides a total of $39.2 million for various Army Ready Reserve incentive programs. This figure is a 17 percent increase over the FY 1985 budget and will build Army Ready Reserve strength closer to the wartime required level. The FY 1986 program increases Selected Reserve strength incentives by about 8.5 percent, and more than doubles the IRR's strength incentives. Both of these bonus programs are tied to increasingly demanding qualitative standards and to specific military skills and specialties required within the Total Army's mobilization structure.

Army Reserve recruiting and retention efforts in the recent past have been quite successful. However, faced with a steadily declining number of service-eligible eighteen-year-olds, the Army Reserve must do all it can to make its enlistment and reenlistment incentives as attractive as possible. Carefully targeted incentive programs are vitally necessary if the Army Reserve is to continue the improvement that has characterized recent strength maintenance efforts.

Full Time Unit Support and the Active Guard/Reserve (AGR) Program

The FY 86 budget request contains a significant increase in the number of AGR personnel providing full time support to troop units. AGR full time manning personnel will increase by 3,420 (50.7%), bringing the total number of full time personnel supporting units of the Army Reserve to nearly 19,000, an increase of about 23 percent.

The AGR program is designed to improve the mobilization readiness of the Total Army by providing experienced Reserve personnel on duty in a full time military status to advise, administer, train, and manage Army Reserve personnel and units. The program includes several categories of Reserve personnel rendering full time support to various elements of the Army Reserve to enhance the Reserve's ability to perform its wartime missions.

AGR personnel assigned to troop program units serve in administrative, maintenance, logistical, and training areas--all intended to assist drilling Reservists in meeting their mobilization requirements. The addition of full time personnel represents a commitment to improved readiness by the Army leadership. The AGR end strength requested in the FY 1986 budget submission is 14,714.

Reserve Officers' Training Corps (ROTC)

The FY 1986 ROTC budget request is $108.4 million, a 15.9 percent increase over FY 1985. During FY 1986, 8,300 officers are programmed to be commissioned through ROTC. This is a significant step toward our FY 1989 goal of 12,500 commissioned graduates. Officers commissioned through ROTC, the largest single source of USAR officer accessions, will serve in all components of the Total Army. In FY 86 the numbers of Junior ROTC cadets in high schools in the United States and abroad will increase by 9,100 and the number of high schools offering the Junior ROTC program will increase to 897. The Army leadership is pleased with the upswing of interest in and commitment to the ROTC program seen in the past few years and is doing all it can to take full advantage of this improving climate of public response.

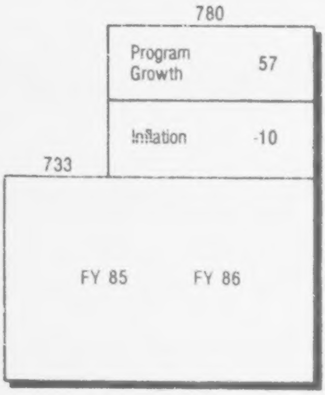
Health Professions Scholarship Program

The Health Professions Scholarship Program, produces officers for the military health disciplines. Candidates accepted by an accredited institution for professional training are selected by the Office of The Surgeon General for these scholarships. Each participant is required to accept a commission as a second lieutenant in the Army Reserve, complete 45 days' active duty training each year, and upon graduation, serve at least three years on active duty. The FY 1986 budget provides a monthly stipend of $602 as well as full pay and allowances for 45 days of active duty for each of the program's 1,242 participants. The total amount requested in FY 1986 is $14 million. This program is an essential element in the ultimate resolution of the serious physician shortfall faced by the Army.

OPERATION AND MAINTENANCE, ARMY RESERVE

The Operation and Maintenance, Army Reserve (OMAR) budget request for FY 1986 is for $779.6 million, an increase of $46.9 million over FY 1985. The FY 1986 estimate includes price deflation of $10.0 million, so that the net effect is an increase of $56.9 million in the OMAR program.

OPERATION AND MAINTENANCE, ARMY RESERVE
ANALYSIS OF CHANGE
($ IN MILLIONS)



INCREASES	$
CAMIS	13.5
Paid Drill Strength Increase	10.9
Recruiting	10.8
Real Property Maintenance	10.0
Base Operations	8.1
Full Time Unit Support	7.2
Readiness	3.6
Other	10.0
DECREASES	
Transfer to OMA (Ft. Drum), OPA and NGB	-17.2

The FY 1986 OMAR budget provides funding for Army Reserve unit training ($434 million), depot level maintenance ($10 million), communications support ($19 million), base operations ($206 million), recruiting ($53 million), and other management activities ($58 million).

OPERATION AND MAINTENANCE
ARMY RESERVE
($ IN MILLIONS)

	FY 84	FY 85	FY 86
TRAINING AND ORGANIZATION OF MISSION FORCES	394	407	434
DEPOT MAINTENANCE	8	9	10
BASE COMMUNICATIONS	17	18	19
BASE OPERATIONS	197	203	206
RECRUITING AND ADVERTISING	35	43	53
MANAGEMENT SUPPORT	41	53	58
TOTAL	692	733	780

Supplies and Equipment

Supplies and equipment are essential ingredients of mobilization readiness of Reserve forces. As a result of Congressional actions over the past three years, almost all high priority, early deploying Reserve units are now more fully provided with their authorized supplies and equipment. Priority units are currently being filled with their minimum essential equipment for training. Continued emphasis and growth is necessary to fully stock all mobilizing and deploying USAR units with such items as cold weather clothing and equipment, chemical defensive equipment, and other go-to-war stocks required by their missions.

CONCLUSION

The Army Reserve, as a key element of the Total Army, continues to grow in scope and importance. The half million citizen-soldiers of the Army Reserve are fully cognizant of the nation's expectations and insistence upon the highest standards of readiness and professionalism. They are ready and will continue to be ready to meet their country's call whenever it may come.

With your continued support, the Army Reserve will continue to provide trained units and qualified individuals available in time of war or national emergency as part of the Total Army of excellence.

ARMY NATIONAL GUARD

STATEMENT OF MAJ. GEN. HERBERT R. TEMPLE, JR., U.S. ARMY, DIRECTOR, ARMY NATIONAL GUARD

DETERRENT CAPABILITY OF ANG

General TEMPLE. Mr. Chairman, speaking for the Army National Guard, inasmuch as you agree to accept my full statement, I will not read the statement for you, but will make a few oral remarks.

Today's Army National Guard numbers over 430,000 men and women, making it approximately the 10th largest Army in the world. Obviously, that is a significant deterrent to war. It will remain a significant deterrent to war only if we are ready to fight. We are doing all we can to train soldiers to achieve the missions which our Nation gives us.

We are looking to you to help us provide the tools required for those soldiers to not only achieve the mission they have been given, but to give them an opportunity to survive on probably the most lethal battlefield to which we will ever send our soldiers.

Mr. Chairman, I am ready for your questions.

[The statement of General Temple follows:]

STATEMENT OF MAJ. GEN. HERBERT R. TEMPLE

INTRODUCTION

Not since that fateful April day in 1775, when the militia at Lexington "fired the shot heard 'round the world," have the citizen soldiers of the United States been so essential to the security and preservation of our nation's liberty. The early militiaman lived with the reality that, at any time, he might have to leave the peace and tranquility of home and labor for the battlefield, with little or no time for fitting and drilling before the fight. We have come full circle, for today's Guardsman must prepare for a similar reality as he trains for the battles of the future.

The reliance upon the Army National Guard as an equal partner in the Army, assuming roles and missions comparable to active Army elements, has cast the Guard into a position of importance to our nation never experienced by Guardmembers of the past. Until recently, veteran Guardmembers' visions of mobilization and deployment were a replay of World War II, Korea and Vietnam. Mobilization procedures, movements to mobilization sites, personnel and equipment fills, post-mobilization training to those levels never experienced in peacetime training, and then leave and fond farewells were often both our memories and expectations.

Regrettably, the Guardsmen and women of today's modern force may not have the luxury of a slow or ponderous mobilization and preparation before they are expected to step onto the most deadly, vicious and demanding battlefield upon which Americans will have ever fought. Of course, today we continue to plan and refine our mobilization procedures so that we might effectively squeeze every available hour to prepare our soldiers to fight and survive. But the leaders of our Army and National Guard know full well that the rapid pace of events, scarcity of resources, and worldwide contingencies will severely constrain our potential to adequately prepare our soldiers after mobilization.

Our efforts, therefore, to improve readiness during peacetime face their greatest challenge ever: to provide meaningful realistic training that makes optimum use of time, our greatest resource, and optimum use of people, our greatest asset. This training, however, does more than prepare our soldiers for the rigors of the future. It also helps us assume the increased responsibility being placed on us for the defense of our country and the resources entrusted to us. We have made a personal and professional commitment to our national and state leadership, to Guard members and their families, and to all Americans, that the public's trust and confidence in the National Guard not be misplaced.

Today's Army National Guard is unequalled in the 348 year history of the American militia. Its professionalism and military capabilities are reaching new heights and achieving acclaim throughout the world. It is moving onto center stage among the world's most respected military forces, through aggressive tactical training and by assuming worldwide training missions. Our personnel are found throughout the world demonstrating their skills and dedication to our nation and to foreign observers, friend and adversary alike.

National Guard personnel train side by side, with our Total Army partners, reaching, and at times, exceeding the professional standards established by the Army. We benefit from our close association within the Total Army, never failing to seek advice and assistance from our Army partners. Seldom will one find a military observer of the Guard who is not impressed with the Guardmember's desire to learn, achieve and often surpass the highest standards of the Army. This total commitment by our soldiers makes the sense of responsibility ever more demanding upon our leaders.

What follows is a detailed discussion of how resources have been and will be used to accomplish our Federal mission and a brief discussion of our state mission. The Federal mission is primary but it is the state mission which causes the National Guard to be unique among the Reserve Components.

STATE MISSION

Fiscal year 1984 was another active year as the National Guard continued to respond to emergencies throughout the states and territories and assist in the preservation and protection of life and property. This year our personnel responded to 391 call ups in 49 states and territories, continuing a trend to utilize the training and expertise of our forces to assist civil authorities during all types of emergencies. Weather extremes ranging from snow storms and severe cold to tornados and flooding caused the majority of call ups. Forest fires and volcanic eruptions also required the help of citizen soldiers. The human element was most prevalent in assistance that required containment of oil spills, housing of the homeless, and search and rescue missions. Our support to drug enforcement agencies continued as an increasing number of states engage in the task of marijuana eradication and other illegal substance suppression efforts. Nearly a thousand of our personnel were called to state active duty from California and surrounding states to assist civil authorities by providing aviation and other logistics support during the Games of the XXIII Olympiad in Los Angeles.

Requests for specialized equipment and personnel, in a variety of missions, continue to reflect confidence in and public acceptance of the National Guard as a professional emergency force available to protect the citizens of the United States and its territories.

FEDERAL MISSION

ORGANIZING THE GUARD

Forty-six percent of the combat units and thirty-seven percent of the support forces within the Total Army are provided by the Army National Guard. Major unit contributions to the Total Army force structure include nine divisions, fourteen separate brigades, four armored cavalry regiments, an infantry scout group, two special forces groups, five roundout brigades, and seven roundout battalions. Roundout units provide the force structure, essential to an Active Component division, to fill its total organizational requirement.

In FY 85, Army National Guard force structure actions will include continued organization of the 35th Infantry Division (Mechanized), headquartered at Fort Leavenworth, Kansas. The 35th Division is made up of units from Colorado, Kansas, Kentucky, Missouri, and Nebraska. Reactivation of this division began on August 25, 1984 when the headquarters company was organized. The Division Support Command/Divisional Materiel Management Center, the divisional engineer battalion headquarters, and the divisional signal battalion headquarters will be organized in FY 85. Organization of the Army's only Mountain Battalion in the Army National Guard will be completed in FY 85. This unit, a uniquely organized infantry battalion designed and equipped to operate in mountainous and high alpine terrain, will be the first such unit in the Total Army since the conclusion of World War II. The Mountain Warfare School has been activated at Camp Ethan Allen, Jericho, Vermont to support the battalion and further serve as the focal point for mountain training in the Army National Guard.

The 41st Infantry Brigade, Oregon Army National Guard, roundout to the 7th Infantry Division, will change to roundup status in FY 85. This change was caused by the conversion of the Active Army's 7th Infantry Division to a light infantry division. As a roundup brigade, the 41st will retain its current resourcing priority and maintain its former training relationship with the 7th Infantry Division. However, it will become a corps asset rather than a divisional unit.

In September 1984, Department of Army announced that two more light infantry divisions will be added to the Active Component force structure, commencing in FY 85. Both divisions are slated to be completely structured by the end of FY 88. These are the 10th Infantry Division (Light), which will be based at Ft. Drum, New York, and the 6th Infantry Division (Light), which will be located in Alaska. Both divisions are programmed to have Reserve Component roundout brigades. The Army National Guard provided its recommendations for roundout to Department of Army in October 1984. The decision on roundout for the first Active Component division to activate, the 10th in FY 85, will probably be made in February 1985. The decision on roundout for the 6th will be made at a subsequent unspecified date.

If the decision is made to roundout the 10th Infantry Division (Light) with an Army Guard brigade, then the number of roundout brigades in the Army National Guard will remain at five in FY 85. Also, in FY 85, the number of roundout battalions will be seven, unchanged from FY 84. Currently 27 activations and 263 conversions of Army Guard units are programmed in FY 85. During FY 85-86, many of these actions are linked to force structure modernization of our three existing heavy divisions and the formation of the fourth, the 35th Infantry Division (Mechanized).

In FY 86, we will begin organization of a new light infantry division through the consolidation of existing brigades. The new division will be the first and only light infantry division programmed for the Army National Guard, our tenth combat division, and will increase the number of Total Army divisions to twenty-eight. The two separate brigades selected to form the nucleus of the division are the 58th Infantry (Maryland) and the 116th Infantry (Virginia). Remaining force structure for the division will be organized through activations and conversions of existing units in Maryland and Virginia. The designation of the new division will be the 29th (Blue and Gray) Infantry Division (Light). Structuring of the division will be completed in FY 86, with the exception of the air defense artillery battalion, which is programmed to be activated in a subsequent year. The headquarters will be located at Ft. Belvoir, Virginia.

Other significant force structure actions during FY 86 will affect the continued organization of the 35th Division. The maneuver brigades will convert to an organic divisional organization, the Division Artillery will be activated and existing firing battalions will convert to divisional organization. Activation of the recently designed Combat Aviation Brigade will occur. By the end of FY 86, the 35th Division will have all of its structure with the exception of one armored battalion, its air defense artillery battalion, and a target acquisition battery.

The transfer of Active Component missions and equipment sets to the Reserve Components will continue in FY 86. Key actions include the activation of an engineer battalion (combat heavy) and an engineer company (combat heavy) in the Army National Guard. Cited actions are called Reserve Component Initiatives and can be expected to continue.

The roundout role for the 29th Infantry Brigade, Hawaii Army National Guard, roundout to the 25th Division, will change to roundup in FY 86 as the 25th Division converts to the light infantry division configuration. As in the case of the 41st Brigade, the 29th will maintain its current resource priority and training relationship with the 25th Division but will become a corps, rather than a divisional, asset. Consequently, in FY 86, the number of Army National Guard roundup brigades will increase to two. As cited previously, the 6th Infantry Division (Light) will be formed in the FY 86-88 time frame. If an Army Guard maneuver brigade is selected as roundout for the 6th, then the number of divisional roundout brigades will remain unchanged at five. A total of 80 activations and 92 conversions are programmed for Army National Guard units in FY 86.

MANNING THE GUARD

The Army National Guard completed FY 84 by posting one of its most successful years ever in terms of strength gains. During the year, we achieved our highest end strength in history, closing the year with 434,259 men and women. This increase of 17,081 from the end of FY 83 represents 100.3 percent of our programmed end strength, 99.8 percent of authorized strength, and 93.4 percent of wartime required strength. The end strength is composed of 41,847 officers and 392,412 enlisted personnel.

In 1956, Public Law 845 signed by President Dwight Eisenhower, allowed nurses to join the National Guard. In October 1971, the first two prior service women (other than nurses) enlisted in the Army National Guard. Beginning in May 1972, we extended our women's recruiting program to include enlistment of nonprior service women. By the end of FY 72 the number of Army Guardswomen stood at eighty six. Women have since joined the Army Guard in increasing numbers as evidenced by the strength figures for FY 84 which included 2,072 officers/warrant officers and 20,432 enlisted women. Initiatives taken to encourage female accessions include the FY 85 State Accession Mission which, for the first time, included a female nonprior service objective.

Minority commissioned/warrant officer strength at the end of FY 84 was 3,957 (3,495 commissioned; 462 warrant officers). This represents a fiscal year increase of 918 officers and 9.5 percent of the Army Guard officer force. The total for Black officers was 1,883 (1,737 commissioned; 146 warrant officers), 4.5 percent of total Guard officers. Female commissioned/warrant officer strength was 1,946/126, 5.0 percent of our total officer force. We remain committed to the goals and principles of minority officer participation within our officer force as originally established by the Minority Officers Recruiting Effort (MORE) Program in March 1978.

Commissioned and warrant officer strength reached 97.3 percent of our programmed objective for FY 84. Accessions from the Reserve Officers Training Corps (ROTC) accounted for 41.4 percent of total commissioned officer accessions. By FY 90, ROTC accessions are expected to account for over 50 percent of commissioned officer accessions. This will make ROTC the largest single-source for Army National Guard lieutenants. During FY 84, State Officer Candidate Schools (OCS) produced 31.6 percent of our commissioned accessions. Due to production constraints imposed by Department of Army, this percentage is expected to drop to 23 percent in the future. However, State OCS will remain a viable source to meet expanded officer requirements in the event of mobilization, for providing officers to geographically remote areas, and for furnishing enlisted personnel a means of upward mobility in the Guard.

Retention of first-term and career soldiers was an integral part of our historic end strength accomplishment in FY 84. The efforts of our expanded retention force, strength management education and training, command emphasis at all levels, resurgence of patriotism, and positive attitude toward military service enabled us to achieve 82.8 percent of programmed retentions during FY 84.

Quality of our enlisted force has steadily improved. In the last eight years, we have increased the number and percentage of high school diploma graduates (HSDG) while reducing the number and percentage of Test Score Category IV accessions. In FY 77, 61.8 percent of nonprior service (NPS) accessions were high school graduates and 14.9 percent of NPS accessions were Test Score Category IV. By FY 84, 68.8 percent of NPS accessions were HSDG and only 6.9 percent were from the lowest test score category. Enlistment standards have been raised in the last five years to improve the quality of our enlistments. In FY 79, we accepted all Test Score Category IV nonprior service enlistees. Starting in FY 84, the enlistment standard was changed so that only HSDG and high school seniors in Test Score Category IV could be accessed. High school seniors who fail to obtain their diploma must then qualify as Test Score Category III, or higher, accessions. Our personnel quality objective for FY 85 and outyears is to improve accessions by establishing standards that will reduce those categories of individuals that experience the highest attrition rates and least demonstrate potential for successful completion of training.

To achieve established end strength in FY 85 and FY 86, 438,383 and 450,496 respectively, numerous dynamic initiatives have been identified and implemented. The Director, Army National Guard, internally reprogrammed six hundred and one (601) personnel authorizations to expand the existing recruiting force, providing 24 percent growth in the Full-Time Recruiting Force (FTRF) during FY 85. An increase of 225 FTRF personnel is included in FY 86.

In FY 85, an additional 65 Active Guard/Reserve (AGR) personnel will be tasked with increasing the retention of trained personnel who complete their required term of service. With this expanded recruiting and retention force, an aggressive national advertising campaign, and a viable enlistment/reenlistment/educational assistance bonus program, we are confident we can attain programmed FY 85 and 86 end strength.

Officer/Warrant Officer Development

As the Army National Guard plays an increasing role in the national security structure of our nation and its allies, we must prepare our leaders to provide the intellectual and professional leadership for what is one of America's most significant military forces. We are on that path through civilian and military education.

We have continued to raise standards for appointment, promotion, and retention of both commissioned and warrant officers. New policies for military and civilian education requirements mirror the intellectual quality today's modern Army requires of the officer corps. Today's Army National Guard officer education profile shows 53 percent of commissioned officers have a baccalaureate degree or higher. In order to increase this educational level, we have implemented the following changes to the civilian education requirements for commissioned officers: a. all of our commissioned officers are required to complete at least two years of college or, its equivalent, by

1 October 1989; b. all State OCS graduates must have two years of college prior to appointment starting in 1989; c. all officers appointed after 30 September 1983, are required to have a baccalaureate degree before promotion to major. Resident requirements for military education now result in 100 percent Basic Course attendance compared to approximately 65 percent one year ago.

The educational goal established for our warrant officer corps is achievement of an associate degree. Currently 45 percent possess this level or higher civilian education. Warrant officers provide the technical skills necessary to maintain, administer, operate and supervise our increasingly sophisticated systems. In order to ensure that our 8,805 warrant officers keep pace with the Army's new technology, systems, and overall force integration, an extensive Professional Development Program will continue to demand strict military education requirements for appointment, promotion, and retention. During FY 85, a new warrant officer appointment procedure will be developed for the Army National Guard. When implemented in early FY 86, the combination of a general knowledge entry course, coupled with technical certification, will result in higher qualifications and meet both current and future requirements of the Total Army.

To assist our officer corps in achieving these new educational requirements, we have implemented the Assistance for Military Professional Development (AMPD) Program. Currently providing educational assistance to our officers and officer candidates, this new initiative allocates military education funds to each state for use in defraying 75 percent of tuition and laboratory fees identified by the school at the time of registration. AMPD tuition assistance is only available to drilling Army National Guard officers or officer candidates not receiving tuition assistance from any other source, i.e., GI Bill. The policy of providing 75 percent tuition assistance for these personnel under AMPD is intended to coincide with support provided to our AGR personnel under the Army Continuing Education System (ACES).

Additionally, Department of Army has extended the ACES Program to the Reserve Components beginning 1 October 1985. The program will provide educational assistance to all Army Guard personnel in their pursuit of continuing education.

Full-Time Support

Our Full-Time Support program consists primarily of a combination of Active Guard/Reserve (AGR) full-time military members and Military Technicians. Together, the AGRs and Technicians perform essential services without which the Army National Guard would have no continuity of operations and could not be effective in accomplishing the required training, supply, maintenance, administration and management to meet federal missions. Full-time support of units and support activities is a critical element in supporting the growth in strength and modernization of the Army Guard. The Full-Time Support Program is the "Backbone" of the Army National Guard.

For the past several years, much emphasis, including the programing, budgeting, authorization, and appropriation of resources has been given to increasing the readiness of the Army National Guard to perform newly assigned missions. The increased strength, new units, and great amounts of new equipment being delivered to the Army National Guard have greatly increased full-time support requirements. To keep pace with these requirements, we are requesting an increase of 10,096 AGRs in FY 86, bringing our total to 30,679 at year end. The requested increase in AGRs supports our highest priority requirement of providing full time manning for our combat and combat support units. There is also a need for additional technicians to support increased requirements for supply, maintenance, and administrative functions.

We have found, through experience and analysis, that AGR personnel are better suited for providing full-time support to units, whereas, military technicians are best suited for employment in support activities, including headquarters, supply and maintenance. To derive maximum benefit from our full-time support assets, there is a need to separate the functions of AGRs and Technicians by aligning each to those responsibilities that are in concert with the purpose of each program. We have not implemented such a realignment because of a possible conflict with Congressional language prohibiting the movement of technician positions to support activities. We would like Congress to revise the language prohibiting the movement of technician positions and allow us to implement a mix of the force established by Congressional direction in 1982.

EQUIPPING AND SUSTAINING THE GUARD

Although equipment shortfalls remain, never before in our history have Guardmembers been better equipped in peacetime. Not only does the current equipment picture give us confidence in our quest to provide adequately equipped units capable of mission accomplishment, but the prospects for the future give evidence of significant enhancement to our inventories in nearly every category of equipment.

Ground Equipment

Department of Army has initiated plans to accelerate delivery of modern equipment to the Army National Guard. At the end of FY 84, our tank force consisted of approximately 2900 main battle tanks. FY 85 heralds a number of changes and initiatives that will significantly benefit the Army National Guard. Planned delivery of 180 M1 tanks in FY 85 will increase this modern system in the Army Guard to a total of 240. Department of Army has proposed increased fielding of M60A3 tanks to the Army National Guard during the FY 86 - FY 92 time frame. If adopted, all armor units will have 100 percent fill of M60A3s and M1/M1A1 tanks by the end of FY 92.

Accelerated fielding of Field Artillery systems is continuing. As an example, M198 (155mm towed howitzer) fielding was accelerated to units in New Hampshire, Missouri, and Rhode Island in FY 84. TACFIRE, Battery Computer System, and FIREFINDER fielding have met with repair parts and maintenance support problems which have hindered attempts to accelerate the fielding of these systems. Current staff actions in the areas of upgunning current 105mm units to 155mm weapons and fielding of the Multiple Launch Rocket System in our units have demonstrated the Army's desire to accelerate modernization efforts for the Army Guard.

In FY 84, equipment worth $796 million was distributed to the Army National Guard by Department of Army. Based on current plans, $1.045 billion worth of equipment will be distributed to the Army National Guard in FY 85. This will include such major items of equipment as the M1 tank, Bradley Fighting Vehicle, Improved TOW Vehicle (ITV), M198 Howitzer, Chaparral, and AH-1S Cobra Attack Helicopter. Department of Army procured over $900 million worth of equipment for the Army National Guard in FY 84 and projects procurement of equipment worth $1.7 billion in FY 85 and $1.5 billion in FY 86. This equipment will be delivered in the FY 85 - FY 89 time frame.

Congress continued to strongly support equipment procurement for the Army National Guard in FY 85. An appropriation of $150 million was provided for the Army Guard to procure equipment, continuing a practice which began in FY 82. Through FY 85, Congress has provided the Army Guard with appropriations totalling $350 million specifically for equipment procurement. We have utilized these appropriations, in coordination with the Department of Army staff, to improve the equipment posture of our early deploying units. The $150 million provided in FY 85 will procure Armored Personnel Carriers, M198 Towed Howitzers, Improved TOW conversion kits, TRITAC communications equipment, electronic shop shelters, 5 Ton Cargo Trucks, and Commercial Utility Cargo Vehicles.

Congress has also directed Department of Army to procure equipment for the Army National Guard from its Procurement Army appropriations. As a result, Department of Army will procure AH-64 and UH-60 helicopters, C-12 aircraft, Chaparrals, and ITVs for the Army Guard with funds appropriated in FY 85. Funds were also provided in FY 85 for the upgrade of AH-1G helicopters to the AH-1S COBRA/TOW configuration. Since FY 78, Congress has directed procurement of over $600 million worth of equipment for the Army National Guard from Department of Army appropriations. This $600 million added to the $350 million mentioned above totals to over $950 million worth of equipment provided to the Army National Guard as a result of Congressional initiatives since FY 78.

Obviously, the purpose of this significant influx of resources to the Army National Guard is to reinforce our nation's reliance on the Guard as a key element in national security. Nevertheless, we remain critically short of equipment which we view as essential to permit our soldiers to adequately conduct sustained combat operations.

Aviation Equipment

We have a present requirement for 493 attack aircraft. There were 144 AH1 attack aircraft on hand at the end of FY 84 with an additional 75 projected for fielding by the end of FY 86. Of these 75 additional aircraft, 23 are being delivered as a result of directed procurement actions by Congress in prior years and 52 are being transferred from the Active Component. This will increase the total number of AH1 attack helicopters in our inventory to 219. Funds were appropriated in FY 84 and FY 85 to convert 58 of 87 AH-1G aircraft, transferred to the Guard from the Active Component, to the AH-1S COBRA/TOW configuration. Department of Army is requesting funds in FY 86 to convert the remaining 29 AH-1Gs to the AH-1S COBRA/TOW configuration. When the conversion of the 87 AH-1Gs is complete, all 219 attack helicopters in our inventory will possess a TOW/anti-armor capability. In FY 86, we will have a shortfall of 277 attack aircraft. These shortages will be alleviated as the production of AH-64 aircraft for the Active Component causes a displacement of additional AH-1S helicopters to the Army National Guard. The 18 AH-64s, provided by Congress from FY 85 procurement, are scheduled for fielding to an attack battalion in the North Carolina Army National Guard. The selection of the North Carolina unit was based upon its readiness, its corps mission, and its geographic proximity to the non-divisional aviation intermediate maintenance company at Fort Bragg, North Carolina. Fielding of the AH-64s is scheduled to begin in FY 87.

Six C-12 aircraft, provided to the Army National Guard from Congressionally directed FY 85 procurement, will expand our C-12 fleet to a total of eighteen. The influx of C-12 aircraft into the Army National Guard has provided improved command and control of geographically dispersed units. Additionally, it has permitted our leadership to more actively participate in Army programs employing an economically sound method of transportation. It has also provided for redistribution of aircraft throughout the Army National Guard, providing needed aviation assets to states which previously had been denied a reliable command and control capability.

C-12 aircraft are to be used in a regional support role with a selected state responsible for regional support in accordance with the following priorities: Support of the managing state Adjutant General, regional support for other state Adjutants General, support of the managing state staff, support for other regional state staffs, and support for Active Component and other Reserve Component personnel on a reimbursable basis for operating costs.

We operate a fleet of 72 CH-54A/B helicopters which provides our heavy lift capability. The projected phase-out for the CH-54s has been established as the year 2000. In order to maintain these as deployable, supportable, and mission capable systems, several actions are required. These include increased repair parts procurement, product improvement applications for sustainability, depot level repair of the airframes, and an avionic/electronic upgrade. The latter is required to maintain communications compatibility with the more modern Army aircraft. The CH-54 can, with these required improvements, continue to prove worthy of its appropriate nickname, "The Flying Crane".

Air Defense Equipment

We are currently organized with eight battalions of M42 (Duster) Air Defense Artillery (ADA) units, supporting the eight divisions which currently have ADA organizations, and one U.S. Roland battalion, the only unit of its type in the Total Force. The present force modernization plan replaces our Duster units in the FY 85 - FY 90 period. Initially this will be accomplished by converting four Duster battalions to Chaparral and the other four battalions to Stinger organizations. The Chaparral fire units will be fielded from Active Component draw down and other Army inventory for the first and second battalion conversions. The third and fourth battalions are scheduled to be equipped with new equipment purchases. One Duster battalion began its transition to Chaparral in FY 84 and will complete the process in FY 85. The second Duster battalion will begin conversion in FY 85. The Stinger units will be equipped initially with training devices only; subsequently, they will receive the new Lightweight Air Defense System (LADS). Our ADA force will be increased in the future by the activation of six additional divisional battalions, two units for the newest Guard divisions and four units to provide backfill for the Chaparral units. Chaparral units will become corps level battalions when the divisional units are activated to replace them. All divisional ADA units will eventually be fielded with the new LADS. Our ADA force will then consist of ten divisional battalions, four corps Chaparral battalions, and one U.S. Roland battalion. Additionally, three Hawk battalions are to be activated in the Army National Guard for corps missions utilizing equipment displaced from Active Component units.

Modernization of our air defense capability has been among our highest priorities. The aggressive actions taken by Department of Army leadership to resolve this matter are another indicator of the Army's reliance upon the Army National Guard. It further recognizes our ability to effectively employ sophisticated weapons systems as part of Total Force contingency plans.

Communications-Electronics Equipment

In 1982, we conducted a Communications-Electronics Equipment Study which identified problems in the areas of interoperability, compatibility, and supportability. These problem areas were identified to the Army Signal Center, Training and Doctrine Command, Army Materiel Command, Communications-Electronics Command, and Department of Army. Two major interoperability concerns were: (1) first generation multichannel Frequency Division Multiplex (FDM) equipment in our signal battalions and separate signal detachments, and (2) manual switching equipment found throughout our force structure.

Another major equipment issue which has now been identified is Communications Security (COMSEC) for combat net radios in our units. This is an area of critical importance to combat and combat support units. Although VINSON COMSEC equipment is now critically short, it is being fielded and the fielding pace will accelerate over the next two years. However, COMSEC for our forces will remain a critical issue due to the significant shortfall that will remain.

Tactical automation is now programmed by the Department of Army for issue to approximately one-third of all of our battalions. Initially, tactical automation will be provided down to battalion level in the form of Tactical Army Combat Service Support Computer Systems (TACCS). TACCS will complement previously fielded Decentralized Automated Service Support Systems (DAS3) and will increase productivity in all areas of combat service support.

Since the previously mentioned FY 82 study, we have utilized equipment procurement appropriations provided by Congress to procure over $125 million worth of modern, state-of-the-art communications equipment. Coupled with earlier Congressionally directed procurement from Department of Army appropriations, we will receive distribution of approximately $250 million worth of modern communications equipment in the FY 85-87 timeframe.

Signal force structure and signal architecture actions initiated by Department of Army will push our signal structure and equipment posture into a position of being fully interoperable and compatible with the Active Component by the end of FY 92. The capability of our signal units and signal equipment within combat and combat support units, to meet commander's communications requirements, is rapidly improving. Of special importance for future capability are the results of Battlefield Communications Review II. This strategy equips the Army National Guard simultaneously with the Active Component on a theater and corps set basis. This is one of the most important developments in signal planning and programming to date. It will result in a synchronized increase in Communications-Electronics readiness, sustainment, and force modernization in the Army National Guard, in concert with the Total Force policy.

Organizational Clothing and Equipment

The Organizational Clothing and Equipment (OCE) program has been underfunded for a number of years while requirements have continued to grow. Within the overall program of OCE, the most important area of concern is the status of Chemical Defense Equipment (CDE). We have pursued an aggressive program to purchase CDE for contingency and training stocks for the entire force. Limitations on funding, particularly during FY 84, and the nonavailability of some protective clothing and equipment items have slowed the progress toward achieving these goals. Shortages of CDE amounted to $66.6 million at the end of FY 84 and are projected to be $55 million at the end of FY 85. With the introduction of the new chemical defense battle dress overgarment and increased funding in FY 85, our chemical defense posture is improving. We will receive 50,000 sets of the battle dress overgarment in early FY 85 with an additional 250,000 sets programed for late FY 85 and FY 86. This should provide contingency stocks for two-thirds of our force while freeing up a significant number of current contingency assets for training purposes. Funding provided in the FY 85 budget and requested for FY 86 will support procurement of the Personnel Armor System Ground Troop (PASGT) helmet and vest, Combat Vehicle Crewman Uniform System and the Extended Cold Weather Clothing System. These are modernized systems which are scheduled for fielding to the Army National Guard beginning in FY 85. Significant quantities are expected to be delivered in FY 86.

Repair Parts

Our total repair parts resource requirement reflects maintenance costs directly related to the age of our equipment, to increased quantities of new and more complex equipment, and to the rate of equipment usage by our units to support year around training programs. Repair parts in short supply are high dollar value items such as combat vehicle/tank track, ballistic fire control components, artillery barrels, electronic equipment modules and circuit cards, rust repair components, engineer construction equipment parts, and those repair parts needed to support older models of equipment that are no longer in the Active Army equipment inventory. Funding for repair parts in FY 84 was approximately $7 million below the FY 83 funding level of $123.8 million. This reduced funding, caused by negative growth in the FY 84 Operations and Maintenance, Army National Guard appropriation, resulted in a significant year end FY 84 repair parts shortfall of $132.6 million. Funding for repair parts in FY 85 provides an increase of $72.3 million above the FY 84 level. This significant increase will enhance our materiel readiness program. The most notable improvement will be realized in the increased stockage levels of combat essential Prescribed Load List (PLL) and Authorized Stockage List (ASL) repair parts, reduced to almost zero balance levels during FY 84. Some repair parts shortfalls will continue in FY 85 due to significant increases in both equipment inventory and in the variety of makes and models of equipment to be maintained. The repair parts backlog at the end of FY 85 is projected to be $95.0 million. Repair parts funding requested for FY 86 provides an increase of $36.5 million above the FY 85 level. This increase will improve our materiel readiness program and equipment deployment capability. It will ensure that adequate quantities of repair parts are available to sustain day-to-day maintenance operations. However, significant shortages for PLL and ASL repair parts will continue in FY 86. The repair parts backlog at the end of FY 86 will be approximately $138.6 million.

Depot Maintenance

A series of depot maintenance programs designed to improve readiness is being initiated in FY 85, or continued from prior years, and is expected to continue in the future. Product Improvement Programs for modernization of combat vehicles continue with upgrade of M109A2 155mm self-propelled howitzers to the M109A3 configuration, anticipated to be completed in FY 85. The principal improvement resulting from this upgrade is creation of additional on board ammunition storage capacity. Conversion of the M113 family of vehicles to the A2 model, begun in FY 84, is expected to be complete in FY 89. Conversion to the M113A2 includes cooling and suspension improvements, required as a follow on to the replacement of gasoline with diesel engines, accomplished with the upgrade to the M113A1 configuration. The Coordinated Logistics Support Program was initiated with Communications-Electronics Command in FY 85 and provides improved direct exchange and repair and return to user programs for communications and electronics equipment. Additionally, we are heavily involved in a rustproofing program for all commercial and tactical wheeled vehicles in the inventory. The program is designed to extend the life and ensure availability of these vehicles for the foreseeable future at a cost of approximately $5 million per year. Programmed completion date for the current rustproofing program is FY 89.

We will implement or continue in FY 85 significant aviation depot maintenance programs which are designed to enhance the readiness of the aviation assets in our inventory. Funding was provided by Congress in FY 84 and FY 85 to convert 58 AH-1G aircraft to the AH-1S configuration. Initial delivery of converted airframes is anticipated in FY 86. An overhaul/modification program for OH-6 aircraft is scheduled for start-up in FY 85 at the Mississippi Army National Guard Aviation Classification and Repair Activity Depot (AVCRAD). This program will provide increased reliability and sustainability of the OH-6 aircraft. During FY 85, the OH-58 tail rotor and power droop improvement program will commence. These improvements will greatly increase the reliability and safety of the OH-58 aircraft. We will continue the U-8F aircraft engine modification contract with completion scheduled in FY 86. Cost savings resulting from painting aircraft at the AVCRADS rather than utilizing depot labor at Corpus Christi Army Depot have been in excess of $10 million since this program was instituted in FY 81. The FY 85 on condition maintenance program for the Army National Guard calls for the induction of 85 UH-1, 1 AH-1, and 19 OH-58 aircraft in Corpus Christi Army Depot for overhaul.

Military Construction/Facilities

The backlog of our construction requirements at the end of FY 84 rose an estimated $13 million to $813 million. Increases in this backlog will continue throughout FY 85 and FY 86, peaking at approximately $900 million. This will occur despite significant program growth in FY 85 and FY 86 over the FY 84 funding level. Growth in the construction backlog is a direct result of increased facility requirements to support our expanding force structure and identified shortfalls in training facilities needed to support assigned missions. Among the specific requirements are $22 million for new and modernized facilities for the 29th Infantry Division (Light), scheduled for activation in FY 86. The authorized $98.9 million FY 85 program will permit the construction of fifty major projects. In the FY 86 program request, sixty-seven major projects are proposed including construction of new facilities and modernization or replacement of inadequate, high-dollar contributors to the Backlog, Maintenance and Repair (BMAR).

At the end of FY 84, the BMAR was $59.2 million. For the first time ever, the FY 85 budget contains funding allocated specifically for BMAR reduction, which will cause the backlog to decrease to an estimated level of $52.0 million at the end of FY 85. The Congressionally mandated level of $15.0 million will be achieved by the end of FY 88 if funding, as programed, is provided.

Our range modernization program is aimed at management of range design planning and construction. Additionally, the program will provide a means to meet the training needs generated by force modernization and upgrade existing facilities which have suffered from over a decade of underfunding. An Army National Guard Five Year Master Range Plan has been developed to interface with the Army's Master Range Plan. We are scheduled to receive the Remote Target System on a number of proposed ranges. These new ranges will be fully automated with modern target arrays which realistically portray threat formations and meet training task conditions. The Multipurpose Range Complex will satisfy gunnery requirements for the total family of weapons currently on hand and projected for the Army National Guard inventory.

TRAINING THE GUARD

We rely upon effective training to make our quality people and equipment work together as a team. We may never have all the resources we require, but we are doing everything in our power to ensure that our troops are as combat ready as possible with what they have. As a result, our training continues to be challenging, demanding, and effective.

Unit Training

In the future, we will continue pursuing our goal of "training up"—conducting combined arms training in our units throughout the Guard, at the level at which they will be required to fight. An example of the type of training we are advocating was conducted by the 40th Infantry Division (Mechanized), California Army National Guard, during FY 84 annual training. Sunburst II, a force-on-force combat scenario field training exercise (FTX), was conducted at Fort Hunter Liggett and Camp Roberts, California. This FTX brought the division together as a single unit for the first time in two decades. Although units participating in the exercise were mainly from California, some units convoyed with their organic equipment to the annual training site from as far away as New Mexico and Oregon.

The exercise tested the ability of the division to control, move, administer, and supply all of its organic, attached, and many of the supporting elements with which it would go to war. Training with divisional and non-divisional units in the field made real the concept of a division as a combat unit. The unit commanders of the 40th Division, their staffs and unit personnel learned to conduct operations over distances and in real time as combat situations would dictate. This kind of realistic training is experienced only in an exercise like Sunburst II. Finally, the division realized it could operate as a whole regardless of the difficulties inherent in the situation, mission, or terrain and in spite of some shortfalls in personnel and equipment. Putting the value of Sunburst II in perspective, one of the brigade commanders stated, "without this level of exercise, brigades would never have the opportunity to experience the problems, develop solutions, and learn to operate as an element of the larger organization". Another commander noted, "In order for a division to fight as a division, it must train as one."

An exercise of this magnitude is not accomplished without extensive planning, coordination, and adequate resources. The division was overwhelmingly successful in both the planning and execution of the exercise. It was a remarkable achievement, indicative of what the Army National Guard can achieve and the type of training to which we aspire.

Army Guard participation in National Training Center rotations, exercises, and overseas deployment training (ODT) continues to be our most valuable source for realistic training in a simulated combat environment.

Within the last two years, two of our roundout battalions have experienced the rigors of training as part of a National Training Center rotation at Ft. Irwin, California. These units trained as an integral part of a brigade task force from their parent Active Component division. Lessons learned by these units during their National Training Center experience provide the basis for needed adjustments to their home station training strategy. Five of our roundout battalions will participate in National Training Center rotational training in FY 85 and three more will be challenged by this valuable training experience in FY 86.

Joint Chiefs of Staff (JCS) and Army Major Command (MACOM) exercise participation is designed to train units to evaluate standing operating procedures and war plan development; provide opportunities for CAPSTONE wartime mission training and to strengthen CAPSTONE relationships; train commanders and staffs in the Airland Battle doctrine in as realistic an environment as possible; exercise and evaluate personnel, administrative, logistics, and communications systems; and weld all elements - combat, combat support, and combat service support - into an effective combined arms force. During FY 84, 284 Army National Guard units and unit cells, involving approximately 13,000 personnel, participated in 14 major JCS/MACOM exercises in the Far East, Europe, Central America and the Caribbean. Forty-one units and unit cells participated in REFORGER 84, to include two battalions which shipped their equipment to Europe for the exercise. FY 85 plans call for participation by 318 units and unit cells in JCS/MACOM exercises. Deployment for REFORGER 85 will involve 51 units and unit cells, to include a mechanized infantry battalion task force and an infantry battalion, which will ship their equipment, and three company size units which will draw POMCUS (Prepositioning Of Materiel Configured to Unit Sets). Ninety one Army National Guard units and unit cells will participate in WINTEX 85, a JCS/NATO exercise conducted in Europe, and an infantry battalion will participate in BRIM FROST 85 in Alaska. Current plans call for participation by 394 units and unit cells in JCS/MACOM exercises in FY 86. This includes a mechanized infantry brigade which will deploy with its equipment for REFORGER 86.

Early 1984 marked the start of a unique Southern Command (SOUTHCOM) exercise called Minuteman. Exercise Minuteman I was a JCS approved, SOUTHCOM sponsored, combined task force engineer training exercise conducted on the western coast of the Azuero Penisula, Republic of Panama. The exercise objective was to provide realistic, environmentally unconstrained engineer training, tropical medicine training and logistics over the shore training not available in the United States during stateside Annual Training. From 11 March to 5 May 1984, a total of 750 soldiers from the Puerto Rico, Louisiana, and Florida Army National Guard, the 193rd Infantry Brigade (Panama) and the Panama Defense Force joined forces to construct a 15 kilometer road between Llando de Mariato and Cerro Melena and to survey an additional 27 kilometers of road between Cerro Melena and Arenas. The achievement of this training objective is noteworthy in that Army National Guard elements landed in a totally foreign environment, established operational areas, and successfully completed a major engineer project in a short period of time. Troop support, security, administration, and resupply were also provided during the entire exercise period. This is one of the most remarkable training achievements ever realized by the Army National Guard. At the present time, Exercise

Blazing Trails-85, the continuation of Minuteman I, is underway. The exercise objective is to repair and construct 43 kilometers of road and bridges. Engineer, logistical, medical, and security support are being provided by units from Alabama, Louisiana, Missouri, North Carolina, Puerto Rico, and Wisconsin. Public affairs detachments from Florida, Kentucky, New Jersey, and Texas are also participating. Exercise Blazing Trails-85 is providing our units and personnel outstanding training opportunities in a realistic and demanding environment.

Our ODT program, which has deployed Guard members to Europe, the Far East, and Central America, continues to expand. A total of 527 units and unit cells are scheduled to participate in ODT during FY 85 - a significant increase since the program began in 1976 with only six units.

Individual Training

Another proven success is the Army National Guard Key Personnel Upgrade Program (KPUP). The purpose of KPUP is to further develop key personnel in our units through direct association with their Active Component counterparts during tactical training exercises. It allows our personnel to perform in their assigned military occupational specialty (MOS) either in place of or alongside their Active Component counterpart. During FY 83, Army National Guard KPUP personnel participated for the first time in REFORGER with active Army units currently deployed in Europe and also in tactical training at the National Training Center as integral members of active Army units training there.

These experiences of employing their skills with active units and utilizing the most modern equipment under demanding tactical situations have greatly contributed to improved MOS proficiency. Additionally, it has given our Guardmembers great confidence in their abilities. They return to their units with valuable tactical experience and new techniques which they have practiced in real tactical situations. We look forward to the further enhancement of training and leadership skills for our key personnel through ongoing KPUP opportunities.

The value of KPUP to the enhancement of our combat capability is inestimable - its potential almost unlimited. As an example, in the first quarter of FY 85, nearly 300 Guard personnel have participated in National Training Center rotations with Active Component units, practicing their military specialties as integral parts of Active Component units at Ft. Irwin. The brigade commander, 31st Armor Brigade, Alabama Army National Guard, has reported that over 500 members of his command are veterans of NTC training with Active Component units under this program. Similar experiences are reported by other commanders whose personnel have benefited from KPUP. The significance is that although relatively few of our units have actually participated in NTC rotations, many individual Guardmembers are participating and returning to their units with this valuable experience. High Army Guard retention rates coupled with the expansion of KPUP training will result in development of more effective units with well qualified individuals at relatively low cost.

NCO Education and Training

It is the responsibility of National Guard leadership to provide our non-commissioned officers with the training they need and deserve to permit them to lead our soldiers in battle. It is the NCO and his soldiers who fight the battles; it is they who are closer to the enemy and the fury and agony of combat. Our missions will be accomplished because of their courage and skill more than any other factors. For that reason, the development of our NCO education and training programs will focus on achieving that objective.

Our commanders and senior non-commissioned officers have applauded the contributions of the Reserve Component Non-commissioned Officer Education System (RCNCOES) to the improved leadership posture of our NCO corps. Success of the program is such that approximately 30,000 students are expected to graduate in FY 85. Estimates are that approximately 35,000 students will graduate from RCNCOES courses in FY 86, more than five times the number that graduated in FY 80, the year the program was implemented. RCNCOES training is devoted primarily to leadership skills. Battle skills and MOS enhancement are critical elements of NCO professionalism and are addressed elsewhere.

Our RCNCOES program includes the Primary, Basic, Advanced and Senior Noncommissioned Officer (NCO) Courses and the Reserve Component First

Sergeants Course. Commencing in FY 85, the Reserve Component Primary Leadership Development Course (RCPLDC) will replace the Primary and Basic NCO courses. The RCPLDC was developed to correct the shortcomings that existed in the Primary and Basic courses and gave recognition to the fact that neither course provided any real training on "how to train subordinates". We have implemented five Regional Primary NCO Schools and one centralized Advance NCO School to enhance NCO training and reduce the backlog of 159,000 partially trained NCOs. These NCO Schools will train nearly 15,000 students during FY 86 and will complement the NCO training of the State Military Academies, projected to train approximately 25,000 students next year.

History has proven that events of battle often call upon all soldiers to be able to fight, whether they be cooks, mechanics, or clerks. All of our personnel must be prepared to meet the same battle tests as infantrymen. The Army National Guard Battle Skills Course is designed to provide instruction in the technical aspects of squad and platoon weapons, their tactical employment, live fire familiarization and planning the use of nonorganic supporting weapons. The training, initiated in FY 84, is designed to complement the train-to-train skills taught in the RCNCOES. The course is available to all E5 through E9 Army National Guard soldiers and is conducted on a year around basis at Camp Robinson, Arkansas. This course, consisting of a 15 day period with 154 hours of scheduled field training, will train nearly 2500 Army National Guard soldiers during FY 86.

The Battle Skills course is ideally suited for NCOs who, because of time constraints, are unable to attend comparable Active Component courses of longer duration.

Another specialized training course initiated in the Army National Guard during FY 84 is the Reserve Component Tank Commanders Course. The purpose of this course is to prepare our NCOs for the duty position of Tank Commander in a Tank Company or Troop. Students are trained to instruct crew drills and teach basic skills to their crews. The Tank Commanders Course is taught at Gowen Field, Boise, Idaho and will train over 800 Army National Guard tankers during FY 86. Again, this course fits the needs of Guardmembers with limited time to devote to their military duties.

In order to ensure that the Active Guard/Reserve (AGR) force meets the same professional standards as their active Army counterparts, we have developed the Military Education Program (MEP). In most instances, MEP requires that AGR personnel attend the same courses conducted by the active Army at an appropriate time in their AGR career. Continued service in the AGR program is predicated upon successful completion of MEP. AGR personnel have an immense responsibility to increase our unit readiness by planning and conducting training, preparing the unit for rapid mobilization and deployment, and providing the highest quality leadership at all levels. To set any other standard for professional development is to deny the quality leaders that our soldiers deserve. Equally important is active participation in the MEP by our military technicians. As a vital element of our full-time support force, they must be provided opportunities to attend MEP. This will enhance their ability to perform in both their military and technician capacities. In addition to MEP, technicians must be properly trained to do their technician jobs. The proponency courses taught at the National Guard Professional Education Center, Camp Robinson, Arkansas, contribute to this objective. Participation in MEP and proponency courses will ensure professional development and enhance readiness of all members of our full-time support force.

Army National Guard Aviation

Current aviation training efforts have been greatly improved by the FY 83 activation of the Eastern Army National Guard Aviation Training Site (EAATS). Developed to handle the increased training work load in qualifying our aviators to meet individual and crew requirements, EAATS is designed to complement current training programs, not to replace them. A second aviation training site, the Western Army National Guard Aviation Training Site, is scheduled to be operational by FY 87. Its mission will be to supplement unit tactical training requirements.

The training of our aviation elements is among our highest priorities. We must develop more combat oriented training opportunities for our aviators and their units. Our reliance on Army aviation for much of our ground support clearly dictates that our training and experience must be focused on fully integrated training programs for Army aviation.

We have established an intensive night vision goggle (NVG) training program to meet aviation mission requirements. This training requires not only specific flight training but specialized equipment. The Aviator's Night Vision Imaging System (ANVIS) has been designed to help the aviator meet this essential mission requirement. It is necessary for the Army National Guard to receive ANVIS in the near future for its aviation units for increased operational capability, cockpit compatibility, safety and reliability.

We are in the third year of an eight year NVG qualification training program. This program includes qualification of all of our rotary wing aviators by FY 87 and maintenance of proficiency for aviators assigned to tactical units. This training is being accomplished commensurate with the availability of resources required to conduct NVG training. To date, 1248 of our aviators have been trained with NVGs without an aircraft accident. At the conclusion of this program, our tactical aviation units will have a 24-hour day/night tactical mission capability.

We have experienced an increase in Undergraduate Pilot Training (UPT) quotas from 140 in FY 82 to 237 in FY 84, utilizing all UPT quotas during FY 84. These quotas will increase during the 1980s and will eventually provide an output of 250 Army Guard aviators per year by FY 89. We have seen positive results over the past 3 years since imposing a restriction of 27 1/2 years of age to apply for Initial Entry Flight School. The tradeoff for our highly experienced force of aviators is its steadily increasing average age. Our program is solving the "Aging Aviator" problem and establishes a 20 year life-cycle aviator management program.

Safety

The Army National Guard aviation accident rate increased from 2.00 accidents per 100,000 flying hours in FY 83 to 2.58 in FY 84. Human error on the part of commanders, supervisors, maintenance personnel, and aircrews continued to be the major factor in these accidents. Individual accountability at all levels, intensive management of aviation safety school quotas, and a quarterly aircraft accident review and trend analysis videotape are major elements in the countermeasure program developed to combat this rise in aircraft accidents.

Through an intensive Army National Guard countermeasure program, we experienced an 18 percent reduction in army motor vehicle accidents from FY 83. The FY 84 rate was 1.44 accidents per one million miles of exposure. Fatalities were reduced by more than 50 percent. Non-fatal accidents from other than army motor vehicles were also reduced by 13 percent. To continue an aggressive accident prevention program designed to further reduce personal injury and property damage, we have developed a unit safety officer/NCO training course to be fielded during FY 85. Additionally, a national safety awareness program has been distributed to all of our units. The FY 85 program, the last of an overall five year series entitled "Operation Safeguard", is targeted at the prevention of personal injuries during training exercises and is entitled "Be in Control".

Training Support

Among our greatest training inhibitors has always been an inability to get full benefit from Inactive Duty Training (weekend training assembly periods). We have attacked that problem through training support. This support is designed to enhance our available training time by making ranges, local training areas and armories more effective as training centers through modernization and employment of training devices and simulators.

To maintain our mission readiness through training, the full support of training devices and simulators is essential. This is especially true in light of the unprecedented integration of modern weapon systems and increased constraints on human and materiel resources. The FY 86 budget reflects a $53 million commitment by Department of Army to provide the Army Guard technologically advanced training devices. Procurement of 181 platoon sets of the Multiple Integrated Laser Engagement System (MILES) is programmed. This will provide one set per battalion to each of our maneuver battalions. Two devices designed for use in armories are planned for delivery in FY 86; 103 Tank Gunnery and Missile Trainer Systems (TGMTS) and 252 Video Disc Integrated Gunnery Systems (VIGS) will be fielded to armor units. Additional devices such as Dragon Launch Effects Simulators, Stinger Launch Effects Simulators, maintenance trainers, and chemical detector trainers are programmed for delivery to the Army Guard as part of the $53 million package.

We are developing a training device initiative entitled "Guard Unit ARmory Device Full-Crew Interactive Simulation Trainer (GUARDFIST)". This incorporates the interlocking training strategy of conducting full crew training at the garrison and local training area with a high technological training device that takes advantage of interactive video capability. It is anticipated that this device will keep up with future technology and be used into the 21st century. Current initiatives are aimed at armor and artillery crews, dubbed GUARDFIST I and II, respectively.

Another effort to improve inactive duty training effectiveness involves upgrading and expanding local training areas to offer the best opportunity for tactical training close to home. We have developed a training strategy to assist us in resourcing armory training, local training areas, and major annual training areas. It is designed to maximize time, fuel, and ammunition but reduce wear and tear on equipment. It provides effective, economical training in peacetime and permits us to achieve our training standards while better utilizing time and resources. This interlocking strategy provides a "crosswalk" from platoon level to battalion level training outlined as follows:

a. Training devices are employed which can be used at the armory/garrison training area through platoon level.

b. Local training areas are developed and built where needed; they can be used to train through company level to include company and team combined arms live fire exercises or their subcaliber and MILES equivalent.

c. Annual training at major training areas is devoted to battalion, task force maneuver and combined arms live fire exercise training.

Establishment of Army National Guard Regional Training Centers (RTC) in densely populated areas would further enhance increased levels of training and maximize efficient utilization of training resources. The Ft. Dix, New Jersey RTC is a prototype facility, programmed for construction in FY 86, that will provide a multipurpose unit training location. The RTC will help sustain soldier skills and develop the crew, squad and platoon proficiency required to operate the newest of the Army's weapon and maintenance systems. It will also incorporate high technology training devices on hand and those currently being developed to train combat, combat support and combat service support personnel and units. The center will be flexible enough to accommodate future improvements in state-of-the-art training devices. . Ft. Dix is centrally located near five Army National Guard divisions in a high unit density area. It will afford high technology simulation training facilities for division, brigade, and battalion command and staff training.

Studies conducted by the Logistics Management Institute and the Industrial College of the Armed Forces, coupled with the Department of Army Management Action Plan (MAP), have recognized training shortfalls in Reserve Component (RC) maintenance units and have recommended establishment of Regional Maintenance Training Sites (RMTS). The RMTS will provide maintenance MOS skill transition and sustainment training during peacetime. This training will enable the mobilization and deployment of RC maintenance companies capable of supporting current and force modernization systems. We are working with Department of Army and other Major Commands to develop programs of instruction, procure facilities, provide manpower, and field maintenance training devices to the RMTS. The Army National Guard has been assigned proponency for fourteen sites which will be colocated with Mobilization and Training Equipment Sites/Unit Training Equipment Sites. The first two RMTSs will be operational during FY 86.

Our hospital units currently train with limited amounts of inadequate equipment, different from that which they would be expected to use upon mobilization and which is insufficient to establish the necessary section and unit skills. Establishment of Army National Guard Medical Regional Training Sites is one solution to the problem and essential if our hospital units are to have access to medical equipment sets currently being procured for them. Each Army Guard Medical Regional Training Site would provide storage, maintenance and collective training support for one complete set of modern field hospital equipment. Units would utilize the equipment to conduct section and unit training in a field environment during annual training and could move it to their armories for training during weekend training assemblies. By establishing Army National Guard Medical Regional Training Sites, individual soldier skills and unit training will be markedly improved, thus enhancing the readiness of our sixteen hospital units. Funding of four sites has been proposed with the first being constructed in FY 87 and becoming operational in FY 88.

Actions by Department of Army to increase quantities of training ammunition for the Army National Guard are reflected by authorizations provided in FY 84 and FY 85. In FY 84, we received 60 percent of our training ammunition requirement, valued at over $145 million. The authorization for FY 85 is nearly $195 million, 67 percent of our requirement. This represents the largest percentage of requirement and dollar amount of authorization received in the last five years. We will continue to experience some shortfalls, particularly in 81mm mortar ammunition and 2.75 rockets. Additionally, shortages in small arms blanks may have an impact on MILES training.

READYING/MOBILIZING THE GUARD

We experienced an overall readiness decline of two percent for FY 84. Although military occupational skill qualification, available personnel, and training readiness ratings improved, equipment on hand readiness fell two percent causing the overall decline. We are in a dynamic period. More high priority missions are being assigned to the Army National Guard which causes changes in the force structure and implementation of force modernization programs to ready the force to meet these new challenges. Although all readiness factors are affected by this change, the greatest impact is in the area of equipment on hand. Overnight a unit can go from a combat ready posture to a non-combat ready posture merely because of a force structure change authorizing equipment which is not yet available to the unit. This phenomenon is known as "instant unreadiness".

The Department of Army has instituted numerous initiatives to address the readiness issue. Among these are the following:

a. A policy to combat the "instant unreadiness" phenomenon which permits units to delay the effective date of force structure changes to coincide with the date new equipment will be available. It also permits certain equipment items to be nonreportable for a specified timeframe to allow a realistic amount of time to bring the amount of equipment fill of these items to a combat ready status. The Army National Guard has developed implementing guidelines for this policy.

b. Revision of Army Regulation 220-1, Unit Status Reporting, is designed to more accurately portray the actual readiness status. An example being considered is to allow a unit to report a non-combat ready status (C-5) rating (used for activations and major reorganizations) beyond the current 90 day limit until the unit is able to acquire the resources (personnel and equipment) required to achieve a combat ready rating.

Other measures, instituted by the Army National Guard, include:

a. Alleviation of equipment shortages through Readiness from Redistribution of Army Materiel (REDFRAM). This program provides for movement of equipment from low priority, late deploying units to higher priority units.

b. Development of a plan to improve the Army National Guard strength posture through actions such as emphasis on reenlisting careerists, recruiting prior service soldiers, and providing additional enlistment and educational benefits to early deploying units.

c. Enhancement of training readiness through emphasis on upgrading local training areas, attendance at the National Training Center, and participation in overseas deployment training. More of our units than ever before are engaging in realistic training overseas such as the recent engineer training exercise in Panama.

d. Establishment of state readiness committees to review, in detail, unit readiness status and to institute state level programs to eliminate readiness detractors and to alleviate local readiness problems. Actions a state readiness committee can employ include redistribution of equipment, recommendations for increasing unit training assemblies, or reprioritizing use of training areas and ranges, all of which are designed to maximize improvements in readiness within that state.

The readiness rating provided from unit status report data is only one of many indicators of total mission capability, others being modernization, force structure, and sustainability. As the Army National Guard replaces old items of equipment with new ones, unit capability is increased. However, there is no current system to measure and report these capability increases. For example, an armor unit which receives the new M-1 tank may not change its readiness condition; however, its fighting capability has expanded significantly. We are working with the Active Army to develop such a measuring tool.

The ability to rapidly mobilize our forces and effectively move them to planned locations remains a matter of serious concern to us. Training of our mobilization planners is now a reality with the initiation of the needed Mobilization Planners Training Course. This course will fill an obvious void in our planning effort and will produce more functional plans by ensuring that thoroughly knowledgeable planners are in the program. Along with planning, execution of mobilization plans and procedures remains a high interest area.

We will continue increasing the number of units that participate in mobilization exercises. Our goal for FY 85 is to evaluate 100 percent of units selected for FY 85 Overseas Deployment Training by conducting Mobilization and Deployment Readiness Exercises. That goal should be achievable and has been reestablished for FY 86.

In FY 84, more than 450 mobilization exercises were conducted and more than 500 are planned for FY 85. Although these exercises are a successful means of evaluating our mobilization preparedness, funding is available only for early deploying units. Therefore, we are currently unable to evaluate over 60 percent of our combat divisions, 50 percent of separate brigades, and 100 percent of armored cavalry regiments.

FAMILY AND EMPLOYER SUPPORT

The families, employers, and the American public in general must understand that the Army National Guard carries a major portion of the defense of this nation. Increased participation in National Training Center rotations, JCS exercises, and overseas deployment training serve as examples of expanded training required of many units. Our personnel often find it necessary to train beyond the normal two week annual training period and forty-eight training assemblies per year. As a result, the potential exists to strain family and employer relationships. Acknowledgment of the moral support of families and economic support of employers during these extended training periods must, therefore, be made. The role of the Army National Guard in the defense of this nation is increasing and the continued support and understanding of families and employers toward the citizen-soldier is vital to the success of that effort.

SUMMARY

Leadership is the Army theme for 1985. Army National Guard leadership must exercise a high degree of motivation and sensitivity to strike a balance between the military requirements and civilian obligations placed on our citizen-soldiers. This is especially important in light of the increased reliance being placed on the Guard for National Security, and the effect this could have on every aspect of each soldier's life. Our leadership, at every echelon, must set an example of military professionalism to be emulated by all who serve within our sphere of authority. The exercise of leadership by Army National Guard officials must take the form of providing sound management and enthusiastic support of those programs designed to protect our nation and people.

Our role in the Total Force is vital to our nation's defense. The overall picture for the Army National Guard through the remainder of the decade is a positive one. We have achieved goals beyond our expectations. There is a great deal yet to be accomplished, but I believe we are equal to the challenges ahead, for only with new challenges can we continue to grow and strengthen.

ARMY NATIONAL GUARD BUDGET

NATIONAL GUARD PERSONNEL, ARMY

The FY 86 National Guard Personnel, Army (NGPA) budget request of $3,431 million provides pay and related expenses for Army National Guard personnel. Table 1 shows Army National Guard personnel strengths. Table 2 shows the NGPA budget categories. The FY 86 request supports a 450,496 personnel end strength or a 2.8% increase over FY 85. Funding includes an enlisted recruiting objective of 55,000 Non-Prior Service (NPS) personnel for initial active duty training and 44,000 Prior Service (PS) personnel for a total recruiting objective of 99,000 accessions in FY 86. The full time Active

Guard/Reserve (AGR) support force increases to 30,679 (10,096 over FY 85). Funding for National Guard personnel supports increases in Schools and Special Training ($64 million), AGR support ($265 million), extra week of annual training, additional training assemblies and an increase in strength of Pay Group A/P ($119 million). The Incentive Program, which provides enlistment and reenlistment bonuses and educational assistance, increases by $37 million. Pay Group F, which provides for initial active duty training, is increased by $37 million to provide costs associated with training NPS accessions.

TABLE 1

US Army National Guard
(End Strength)

	FY 84 ACTUAL	FY 85 ESTIMATE	FY 86 REQUEST
Pay Group A	383,074	388,262	388,779
Pay Group F	16,395	16,968	18,468
Pay Group P	18,134	12,570	12,570
Full-Time Active Duty	16,656	20,583	30,679
Total	434,259	438,383	450,496

TABLE 2

National Guard Personnel, Army
($ in Millions)

	FY 84 ACTUAL	FY 85 ESTIMATE	FY 86 REQUEST
Pay Group A/P	1,025	1,600	1,719
Pay Group F	174	271	308
School Training	95	142	172
Special Training	82	125	159
Administration/Support	472	771	1,073
Total Program	1,848	2,909	3,431
Retired Pay Accrual	-	- 763	- 898
Total Excluding Retired Pay Accrual	1,848	2,146	2,533

OPERATION AND MAINTENANCE, ARMY NATIONAL GUARD

The funding categories of the FY 86 Operation and Maintenance, Army National Guard (OMNG) appropriation are shown in Table 3. Real growth in FY 86 is approximately 10 percent and occurs as a result of programed force structure modernization, increased support for modernized systems (87) added to the ARNG equipment inventory since FY 83, and readiness improvements. In addition, this appropriation supports a technician and civilian end strength of 24,553 at a cost of $667.3 million, which accounts for 42 percent of the total appropriation request.

TABLE 3

Operation and Maintenance, Army National Guard
($ in Millions)

	FY 84 ACTUAL	FY 85 ESTIMATE	FY 86 REQUEST
Training Operations	149	166	173
Logistical Support	794	950	1,048
Base Operations	94	129	139
Depot Maintenance	50	67	86
Headquarters and Command Support	69	83	93
Recruiting	12	31	48
Medical Support	9	13	18
Total Program	1,177	1,439	1,605

MILITARY CONSTRUCTION, ARMY NATIONAL GUARD

The FY 86 request for Military Construction, Army National Guard provides for 67 major projects. Included in the major projects are 23 new armories, alteration/expansion of 6 existing armories, 4 aviation facilities, 9 training facilities, 19 equipment maintenance facilities, 3 U. S. Property and Fiscal Office facilities, 2 logistical facilities, and one land acquisition. Increased funding requested for minor construction supports the needs for improved weapons training ranges and storage of unit supplies and equipment. Table 4 displays the MCNG appropriation by major category.

TABLE 4

Military Construction, Army National Guard
($ in Millions)

	FY 84 ACTUAL	FY 85 ESTIMATE	FY 86 REQUEST
Armory	27	28	26
Non-Armory	31	46	45
Minor Construction	7	16	19
Planning and Design	3	9	12
Total Program	68	99	102

BIOGRAPHY OF HERBERT R. TEMPLE, JR.

General Temple began his military career as a private in the 160th Infantry Regiment (Los Angeles' Own), 40th Infantry Division, California National Guard, on 2 June 1947. He was called to active duty in September 1950 and served in Korea as a noncommissioned officer with the 5th Regimental Combat Team, 24th Infantry Division. He was discharged from the Army on 23 May 1952 and subsequently rejoined the 160th Infantry Regiment.

After his direct appointment to second lieutenant on 20 October 1952, General Temple served as a platoon leader and company commander within units of the California Army National Guard's 40th Infantry Division and 40th Armored Division. On 1 June 1962, he was promoted to major and served as Assistant G-1 and Acting G-1, 40th Armor Division and S-1 of the 40th Division Support Command. On 15 September 1966, he assumed command of the 40th Supply and Transportation Battalion, 40th Armored Division and was promoted to lieutenant colonel on 16 November 1966. A year later, he became the Commanding Officer, 3d Battalion, 160th Infantry, 40th Infantry Brigade (Separate). On 22 July 1968, he was assigned as an Operations and Training Officer, Headquarters and Headquarters Detachment, California National Guard. He became the Commandant, California Military Academy (State OCS) on 15 October 1970 and was promoted to colonel on 1 November 1970. During the period 22 July 1968 to 3 March 1971, General Temple served as the Military Assistant to the Governor of California. He was assigned as the Deputy Brigade Commander, 49th Infantry (Separate) on 1 November 1971 and on 13 January 1974 became Commanding Officer, 3d Brigade, 40th Infantry Division (Mechanized).

In addition to his military career, General Temple is the former vice-president and part owner of a trucking and transportation company and also served as the Director of California's Office of Emergency Services.

General Temple attended the United States Army War College from July 1974 to May 1975. After receiving his Masters Degree in public administration, he reported to the National Guard Bureau on 12 September 1975 as the Chief, Office of Mobilization Readiness. On 1 September 1976 he became Chief, Office of Policy and Congressional Liaison.

On 1 October 1978 he was promoted to brigadier general and became Deputy Director, Army National Guard. On 19 August 1982 he was appointed Director, Army National Guard and federally recognized as major general.

General Temple has been awarded the Legion of Merit, Meritorious Service Medal, Army and Air Force Commendation Medals, Good Conduct Medal, Korean Service Medal with one Bronze Service Star, Combat Infantryman Badge and numerous other decorations.

NAVAL RESERVE

STATEMENT OF REAR ADM. CECIL J. KEMPF, U.S. NAVY, DIRECTOR, NAVAL RESERVE

CAPABILITY OF NAVAL RESERVE

Admiral KEMPF. Mr. Chairman, it is my pleasure to appear before you today to bring you up to date on the good news about the Naval Reserve.

I am pleased to report the capability of the Naval Reserve is steadily improving. Selected Reserve strength continues to grow. Readiness indicators are up.

The ambitious horizontal integration program articulated by Secretary Lehman has been accelerated. Our surface force includes increasing numbers of modern frigates while our air units are operating more of the front line aircraft.

QUALITY AND AVAILABILITY OF TRAINING

Quality and availability of training are showing significant improvement. We are not only enhancing our warfighting ability upon mobilization; we are also better able to support Navy active force units as a byproduct of mobilization training, what we call mutual support.

SELECTED RESERVE CATEGORY A STRENGTH

One of the best indicators of improvement in the Naval Reserve is our growth in building Selected Reserve Category A strength. We achieved just over 102,400 of these drilling reservists at the end of fiscal year 1984, will reach 110,000 at the end of fiscal year 1985 and are requesting a program of over 118,000 by the end of fiscal year 1986.

GROWTH

Although we have achieved success to date, growth will be more difficult in the future. The improving economy, shrinking pool of eligible manpower and increased competition from both the public and private sector are headwinds we must overcome.

We need targeted incentives to achieve our goal, increased enlistment and reenlistment bonuses, prior Service enlistment bonuses, unit incentive pay and selective reenlistment bonuses for certain full-time support personnel.

FORCE READINESS

The overall force readiness has shown improvement over the past year, primarily in the areas of personnel and training. Aviation units are benefiting from the force modernization efforts with increased capability of state-of-the-art aircraft.

Readiness has been increased seven percent for Naval Reserve Force ships over last year's average. The other commissioned units of the Naval Reserve Surface Force are also reporting increased readiness.

Reinforcing and sustaining units are reporting better readiness through increased manning and improved training programs.

CONTINUATION OF NAVAL RESERVE IMPROVEMENT

In summary, the improvement of the Naval Reserve continues. We are rapidly evolving from a force in reserve to a force in being. Our ships and aircraft are being modernized at an accelerated pace. Our personnel strength is increasing.

We are planning to reach our mobilization manpower requirements by the end of fiscal year 1988, a growth of almost 30,000 Selected Reserves in 5 years. Our training programs continue to improve. We are adding new missions and redefining existing ones through the efforts of the new total force advocate on Admiral Watkins' staff.

The strong support of these programs by the Congress, the Secretaries of Defense and Navy and the Chief of Naval Operations is being vindicated.

The Naval Reserve is truly a force on the move.

I will be delighted to answer any questions.

[The statement of Admiral Kempf follows:]

STATEMENT OF REAR ADM. CECIL J. KEMPF

Rear Admiral Cecil J. Kempf is the son of Mrs. John J. Kempf and the late John J. Kempf of Kilgore, Texas. He was born on 20 November 1927.

His naval career began in May 1946 as a Naval Aviation Cadet (V-5 Program). Later that year he received an appointment to the U.S. Naval Academy. Rear Admiral Kempf was graduated from the Naval Academy "with distinction" and commissioned an ensign in June 1950. He was designated a naval aviator in November 1951.

Rear Admiral Kempf served with several aircraft squadrons during the first 20 years of his career. He was a member of the commissioning crew of USS OKINAWA in 1962 and served on board as Air Operations Officer for two years. His most significant sea tours have been as Commanding Officer of Air Antisubmarine Squadron 31, Commander of Carrier Antisubmarine Air Group 60, Commanding Officer of USS DUBUQUE (LPD 8), and Commanding Officer of USS TRIPOLI (LPH 10).

Early in his naval career, Rear Admiral Kempf undertook postgraduate studies in the field of aeronautical engineering and received a Master of Science degree from the Massachusetts Institute of Technology in 1957. As a result, several of his subsequent shore duty assignments were concerned with research and development activities. One of his tours was involved with the development of the Navy's S-3A carrier based antisubmarine aircraft. He served as S-3A Deputy Project Manager in the Naval Air Systems Command for three years and then was designated as S-3A Program Coordinator for the Chief of Naval Operations. He served in that capacity until he returned to sea duty and assumed command of USS DUBUQUE in September 1972. Rear Admiral Kempf relinquished command of DUBUQUE in February 1974 and assumed command of USS TRIPOLI in April 1974. In December 1975, he became Deputy Manager, Antisubmarine Warfare Systems Project, in the Naval Material Command and served in that position until his promotion to the grade of Rear Admiral and assumption of duties as Commander, Antisubmarine Warfare Wing, U.S. Pacific Fleet in March 1976. In September 1978 he reported to the Deputy Chief of Naval Operations (Air Warfare) as Director, Aviation Programs Division. In June 1979 he assumed duties as Vice Commander of Naval Air Systems Command and served in that capacity for two years. In July 1981, Rear Admiral Kempf returned to the office of the Chief of Naval Operations and assumed duties as Assistant Deputy Chief of Naval Operations (Air Warfare). On 2 December 1983, he became Commander, Naval Reserve Force and Chief of Naval Reserve, with additional duty as Director of Naval Reserve in the Office of the Chief of Naval Operations.

Among his service awards and military decorations, Rear Admiral Kempf wears the Legion of Merit.

He is married to the former Theodosia Ann Suman of Lanham, Maryland. They reside at 88 Westover Avenue, Bolling Air Force Base, in Washington, DC. They have three grown children.

Mr. Chairman and Members of the Committee:

It is my pleasure to appear before you today to bring you up to date on the good news about the Naval Reserve and to look ahead to the future. I will discuss my "report card" for the past year and present our program for Fiscal Year 1986.

I assumed the duties of Director of Naval Reserve in December 1983. Since then I have developed a new appreciation for Winston Churchill's description of a Reservist as "twice a citizen." The enthusiasm, patriotism and hard work of our men and women of the Naval Reserve should make us all proud.

THE NAVAL RESERVE MISSION

The Naval Reserve is an integral part of the Navy's structure and is essential to the execution of the maritime strategy. To enable the active force to respond to the demands of forward deployments and sea control, we in the Naval Reserve have shouldered more and more of the overall force structure manning. In today's era of a "violent peace" described by Admiral Watkins, we're ready to respond across the spectrum from crisis management to full mobilization. At the low end of the scale of conflict, we can provide immediate and meaningful support to the fleet through our land based aviation squadrons, combat support groups, and staff augmentation units. As the situation escalates toward full mobilization, the Naval Reserve can deliver two kinds of trained, combat-ready products: (1) Commissioned units - air squadrons, ships, construction battalions, cargo handling battalions, mobile inshore undersea warfare units, special boat units, and minesweepers and (2) augmenting units for both forward deployed and ashore Naval forces to bring them to full wartime manning.

The Navy goal of a 600 ship, 15 deployable carrier battle group force is within reach. The achievement of this goal will provide the capability necessary for the success of our maritime strategy. By the early 1990's, we are programmed to have 45 ships of the 600 ship Navy in the Naval Reserve Force. The fifteenth aircraft carrier will carry a Reserve airwing upon mobilization, as will the carrier in the Service Life Extension Program (SLEP). We're committed to improving the readiness and sustainability of the Naval Reserve so it can be a more effective part of this strategy. The Naval Reserve mission is stated simply: to be trained and ready for mobilization, part of the Navy that wins the war at sea.

TODAY'S NAVAL RESERVE

I am pleased to report that the capability of the Naval Reserve is steadily improving. Selected Reserve strength continues to grow. Readiness indicators are up. The ambitious "horizontal integration" program articulated by Secretary Lehman has been accelerated. Our surface force includes increasing numbers of modern gas-turbine powered frigates, while our air units are operating more of the front-line aircraft necessary to win the air war at sea. The quality and availability of training are showing significant improvement. The increases in individual skill levels for our reinforcing units are direct additions to the bottom line--the warfighting ability of the fleet upon mobilization. Overall, gains in these key areas enhance the support we provide every day to Navy active force units as a by-product of mobilization training, what we call mutual support.

Selected Reserve Strength

One of the best indicators of improvement in the Naval Reserve is our gains in drilling Selected Reserve (Category A) strength. We achieved just over 102,400 of these drilling Reservists at the end of Fiscal Year 1984, and we will reach 110,000 at the end of Fiscal Year 1985. We have an ambitious program to reach our full mobilization requirement for trained Selected Reservists as established by the Navy's Manpower Mobilization System (NAMMOS) by the end of Fiscal Year 1988.

Although the Naval Reserve did not achieve the average strength authorized for Fiscal Year 1984, we did achieve 99.3 percent of our target end strength for personnel in a paid drill status and those in the training pipeline, 107,231 of the 108,000 planned. Our growth in these areas has continued to over 108,400 at the end of January 1985, slightly ahead of our plan to reach 113,260 by the end of this fiscal year.

Although we have achieved success to date, growth will be ever more difficult in the future. The improving economy, shrinking pool of eligible manpower, and increased competition from both the public and private sector are "headwinds" we must overcome with a relatively small team of recruiters. We are working to obtain additional recruiters and support funds to optimize our efforts to recruit and retain the highest quality personnel possible in the Naval Reserve. New incentives proposed include increased reenlistment bonuses, a prior service enlistment bonus, unit incentive pay and reenlistment bonuses for certain full-time support personnel. Our requirement for these incentives is based on analyses which included consideration of the beneficial impact of the new G.I. Bill.

This year full-time support or TAR personnel will increase by more than 1,800 to 15,210.

Our Fiscal Year 1986 end strength request for Reservists on full-time active duty in support of the Naval Reserve is 19,510. For the first time this authorization will include an additional category of personnel--those Reservists on Temporary Active Duty (TEMAC) in support of the Naval Reserve. TEMACs who support the active component will remain funded in the Military Personnel, Navy (MPN) appropriation and controlled by active component personnel strength limitations. Our program for Fiscal Year 1986 contains 17,973 active duty support personnel, a growth of 2,763 from the 15,210 planned this year. This growth is necessary to meet TAR manning requirements for an expanding Surface Reserve Force (+1,490), particularly the frigate program, aircraft squadron transitions (+445), and support for an expanding Naval Reserve (+828). The TEMAC program request is for 1,537 Reservists at the end of Fiscal Year 1986. This request includes 585 recruiters necessary to achieve the growth necessary to meet our Selected Reserve strength requirements by the end of Fiscal Year 1988. Our programmed growth will enable us to reach just over 90 percent of that requirement by the end of Fiscal Year 1986.

FY 86-90 RESERVE FORCE END-STRENGTH

	FY-86	FY-87	FY-88	FY-89	FY-90
SELRES (including training pipeline)	122,290	130,115	135,273	137,488	137,831
Active Duty Support (TARs)	17,973	20,082	21,787	22,789	23,154
Temporary Active Duty (TEMAC)	1,537	1,518	1,555	1,638	1,230
TOTAL	141,800	151,715	158,615	161,915	162,215
(average strength)	(134,400)	(147,500)	(155,900)	(160,800)	(162,200)

We have achieved the lowest turnover rate in our recorded history with this past year's rate at only 19.1 percent. Turnover rate is calculated as losses divided by the sum of beginning inventory plus gains [for a fiscal year]. The chief benefit of a low turnover rate is the stability gained by the force. Consequently, fewer new accessions and less initial active duty training are required to meet target strength increases. On the following chart, the dotted lines indicate the unfavorable trends of the late 1970's as well as the very positive direction of the 1980's.

Readiness Improvements

The overall Naval Reserve Force Readiness has shown improvement over the past year, primarily in the areas of personnel and training. Because of the accelerated transition and modernization program, many of our aviation units must report an overall C-5 rating while receiving new equipment, training their flight crews, and performing modifications to existing aircraft. Naturally, this lowers the overall C-rating average of our commissioned units, but is necessary to improve our capability. Improvements in recruiting, training, and retention have helped to increase the readiness of our non-hardware reinforcing and sustaining units that will augment active forces upon mobilization.

Aviation units are benefitting from the force modernization efforts with increased capabilities of state-of-the-art aircraft and weapons systems. Squadrons outfitted with fleet-compatible aircraft are mobilization-ready assets available to fleet commanders. I am confident that exisiting and proposed aviation modernization programs will enable us to continue our progress in aircraft squadron and wing readiness.

The readiness status of ships assigned to the Naval Reserve Force continues to increase. The measured steps we have taken to improve manning aboard our ships and to enhance training are beginning to show some encouraging results. Readiness reported by fleet commanders has increased about seven percent for Naval Reserve Force ships over last year's average. This improvement is particularly noteworthy since it has occured while our frigate fleet is expanding.

The other commissioned units of the Naval Surface Reserve Force are also reporting increased readiness. Over the past year a combination of better retention and recruiting, funding for equipment, and enhanced training opportunities has produced a six percent improvement in overall readiness for Reserve Naval Construction Battalions, Inshore Undersea Warfare Units, Cargo Handling Batallions, and Special Boat Units.

Our more than 2700 reinforcing and sustaining units are also reporting better readiness through increased manning and improved training programs. To illustrate this positive trend, the percent of personnel fully qualified for mobilization in our reinforcing and sustaining units increased steadily from 47 percent in March 1983 to approximately 72 percent in February 1985. Average incremental qualification was adopted as a training criteria in April 1984; prior to that either "100% qualified" or "not qualified" was used. During the same two year period, personnel readiness increased from 72 percent billets filled to 81 percent in February 1985. Over this past year overall readiness and sustaining unit readiness, defined as the lesser of personnel or training readiness ratings, has improved by approximately 11 percentage points over last year.

Equipment Modernization

Naval Surface Reserve

Secretary Lehman has indicated that the Naval Reserve Force will be an essential part of the 600 ship Navy. By the end of the decade more than 40 Naval Reserve Force ships will be available for immediate deployment with the fleet. This year, we have added two more PERRY class FFG-7s to the Naval Reserve Force, bringing our frigate total to 11. We will add four more FFG-7s in Fiscal Year 1986, passing the halfway mark in our ambitious program to assign 26 modern frigates to the Naval Reserve force by 1990. This year, we established the first six Craft of Opportunity Program (COOP) units, with six more programmed for Fiscal Year 1986. We will also add three salvage ships (ARS) in Fiscal Year 1986, bringing to four our total of these ships in the Naval Reserve Force.

We will add one more Mobile Inshore Undersea Warfare unit as well as two new Naval Reserve Construction Battalions to our combat support surface programs. The first of two hospital ship augment units will also stand-up in Fiscal Year 1986. Medical programs have experienced dramatic growth in the Naval Reserve, increasing to a point where 41 percent of Navy's total medical support upon mobilization will be provided by Naval Reservists.

Today the Naval Reserve contains 85% of the Navy's Minesweeper (MSO) capability. Beginning in Fiscal Year 1987, a new "Avenger" class Mine Countermeasures ship (MCM) will join the Naval Reserve force, followed by a surface-effects MSH class in Fiscal Year 1989. These new contruction ships will be assigned to the Naval Reserve after each operates as part of the Active component for one year.

Naval Air Reserve

The horizontal integration program to modernize Naval Reserve equipment is well underway in the Naval Air Reserve. Our first squadron of E-2C model early warning aircraft has completed its transition; the second squadron is slated for Fiscal Year 1988. We will commence transition training for the second F/A-18 squadron in Fiscal Year 1986; and the first squadron, which has 14 of 19 pilots already trained, will receive its first aircraft in that year also. We have begun transitioning both of our West Coast fighter squadrons to the F-14A aircraft and have transferred their F-4S aircraft to the two Dallas-based fighter squadrons which were operating F-4N's. Transition to the A-7E from the older model A-7B is complete in one of the four squadrons scheduled, and is underway in two others. We will complete this program in Fiscal Year 1986. Completion of our airwing modernization program will provide a Naval Reserve carrier airwing for the 15th carrier battle group, ready to deploy upon mobilization. The other airwing will be ready to board the 16th carrier as it completes the Service Life Extension Program (SLEP).

We plan to procure three more used DC-9 aircraft this year. This will bring us to the total of 27 planned to replace the C-118's. Through past studies approximately 37 jet transport aircraft were validated as necessary to provide Navy unique support to a 12 carrier battle group force during wartime. We are embarking on another study to determine the Navy's requirement to support a 15 carrier battle group force.

By the end of Fiscal Year 1986, our Maritime Patrol Air capability will be enhanced markedly through the completion of the TACNAVMOD program for our Naval Reserve P-3 aircraft. We also plan to stand up two more Master Augment Units (MAUs) at NAS Moffett, California and Jacksonville, Florida to train crews in fleet model P-3C's for augmentation of active force squadrons upon mobilization. This will bring to three the number of P-3C MAUs by Fiscal Year 1988.

In Fiscal Year 1986 we will complete the stand up of our LAMPS Mk I squadrons when the third unit, HSL-94, is commissioned at Willow Grove, Pennsylvania. The two new H-60 aircraft procured in Fiscal Year 1985 will be used by HC-9, the Navy's only Combat Search and Rescue (SAR) squadron, to evaluate new SAR techniques. Our goal is to consolidate the Navy light attack helicopter squadron mission with that of HC-9 to form two Helicopter Combat Support (HCS) squadrons, one on each coast, flying H-60 aircraft. These squadrons will provide helicopter augmentation to Navy Special Warfare units as well as combat SAR for the fleet.

One of the ways we train our aircrews to provide combat-ready augmentation to fleet squadrons is through our Squadron Augment Units (SAUs). Naval Reserve aircrews train in fleet aircraft at Fleet Replacement Squadrons (FRS), in their gaining command, and with Reserve Force Squadrons (RESFORONS) that operate fleet compatible aircraft. We have established SAU's flying F-14A, A-6E, E-2C, S-3A and SH-3H aircraft. We plan to pursue this course with other types of fleet aircraft in the future.

Training

Providing quality mobilization training to members of the Naval Reserve continues to be a challenge. Progress in Fiscal Year 1984 has been significant; however, addressing increasing personnel strengths, additional missions and a complicated training environment has not been easy. The major area of improvement is in the development of the Surface Reserve Training Plan. The objective of that plan is to provide a "fully trained" Selected Reservist on Mobilization Day instead of a "trainable" one. Based on success with the Naval Air Reserve Training Program, the surface plan establishes new training policies, defines requirements and provides the delivery system. We will increase the training of individual skills in order to provide more fully-qualified Naval Reservists:

- o We have instituted formal training at Fleet Training Centers for Selected Reservists on weekends.
- o The development of an Automated Billet Qualification Tracking System (ABQTS) to track an individual's qualifications in the Reserve Billet Training Plan is nearly complete.
- o To achieve our goal of improved Navy Enlisted Classification (NEC) qualifications through improved methodology and training, we have started:
    - a. course modularization to make them compatible for drilling Reservist study.
    - b. using civilian vocational technical (VOTECH) training programs to alleviate the shortfall in Navy "A" and "C" school seats.
    - c. accepting substitution of civilian equivalency for Navy NECs.
    - d. recruiting veterans with required NECs.
    - e. programming our non-prior service Sea and Air Mariners (SAMs) for "A" and "C" schools.

- o We are standardizing curricula, publishing onboard training packages, procuring surface training devices, implementing ADP training monitoring systems, and repackaging existing curricula for weekend use.

We continue to emphasize training with the active Navy gaining command. This concept is especially effective in training for individual qualifications. In addition, this training provides opportunities to provide "Mutual Support" to active force units as a by-product of such training. Additional Weekend Away Training (WET) funds will be utilized to support training at the gaining command, active training facilities or at larger Naval Reserve activities.

One important by-product of Naval Reserve training is the assitance provided to the active force in the performance of the Navy's peacetime mission. This mutual support encompasses almost all mission areas. In Fiscal Year 1984 11 Reserve VP squadrons provided 46 weeks of fleet support at overseas bases in the Azores and Japan; 1,240 flight hours were also dedicated to the Vice-President's Drug Interdiction program. Naval Reserve C-9 and C-118 transport squadrons provided all CONUS fleet logistics support and augmented both Mediterranean and Western Pacific based squadrons. Last year, support was provided to the Lebanon Multinational Contingency Force, to the USS MIDWAY in the Pacific, and to various Navy and Marine Corps tactical air wings. Reserve Fleet Composite squadrons provided over 6,000 hours of services to fleet units for dissimilar air combat training, air intercept training, target aircraft for radar tracking exercises and aggressor aircraft in fleet exercises. Other Naval Reserve tactical air squadrons acted as both friendly and opposition forces for war-at-sea, fleet air defense and air-to-air warfare exercises for workup training of deploying battle groups, as well as in multinational and joint training exercises.

Naval Surface Reserve Force ships are under operational control of fleet commanders and thus are fully integrated into fleet exercises, underway training schedules, and other special evolutions. Since Naval Reservists and active component personnel are members of the crews, both the fleet and the Naval Reserve benefit from such realistic training. Other surface units that work alongside their active counterparts are Shore Intermediate Maintenance Activities, which are designed to provide intermediate level maintenance to Navy ships while in port. Last year over 118,000 mandays were provided by Naval Reservists in direct support of ship overhaul and rework projects.

Naval Reserve Cargo Handling Battalion FIVE provided 180 mandays toward the pre-deployment load out of the USS MARS (AFS-1). Naval Supply Systems Command units also assisted their active counterparts in completing projects covering the entire spectrum of supply responsibilities.

Naval Reserve Helicopter Wing squadrons provided plane guard services for carriers conducting refresher training, Combat Search and Rescue training for each fleet carrier wing prior to deployment, as well as tactical training for Special Warfare units.

Reserve Intelligence units accomplished one third of the intelligence production for the Atlantic and Pacific fleet intelligence centers, providing watch teams fully integrated with their gaining commands.

Station and staff augmentation, including at overseas sites, was provided by Naval Reserve men and women from every warfare specialty and staff corps designator. Medical, Legal, Chaplain, Cryptology, Oceanography, Public Affairs, and Civil Engineering Corps personnel participated in fleet support in conjunction with mobilization training. Naval Reserve Construction Battalions provided support to fleet facilities equivalent to 18,000 mandays in Fiscal Year 1984, accomplishing over 23 million dollars worth of repairs, engineering, and construction projects.

Total Force Report to Congress

Last year the Navy submitted the first of its annual reports to Congress on the Navy's Total Force. This report provided considerable information on the progress made up to that time regarding the growth, modernization and integration of the Naval Reserve into the Navy's force structure. The report also discussed several areas of accelerated Reserve force modernization and new or expanded missions, extending into the 1990's. We were very pleased with the report and with the reaction to it from Congress.

That report was produced by an adhoc group headed by Rear Admiral Bruce Newell. The Navy has since institutionalized the process by establishing a permanent organization within the staff of the Chief of Naval Operations, headed by a flag officer, to assess on a continuing basis the Navy's performance in structuring the optimum mix of active and Reserve forces required to fight and win a war at sea.

This year's report to Congress was developed using last year's report as a baseline. It provides the status of each of the initiatives discussed last year and indentifies other initiatives adopted for the Fiscal Year 1986 program or ones being staffed within Navy for consideration in the development of our Fiscal Year 1987 request.

Almost all of the initiatives from last year's report are now a part of the Navy's program. The Naval Reserve role in protecting the Gulf of Mexico Sea Lines of Communication has been subsumed within the Maritime Defense Zone (MDZ) mission. Maritime Defense Zones Atlantic and Pacific have been established, and Navy and Coast Guard Reservists will play a large role in their operation. Last year's report also discussed the feasibility of procuring land based tanker aircraft to be maintained and operated by the Naval Air Reserve. Four aircraft for this mission are being planned. Procurement will begin in Fiscal Year 1987. The following additional initiatives from the 1984 report are also now included in the Five-Year Defense Program (FYDP):

- Modernizing Reserve Maritime Patrol Air Squadrons (VP) through TACNAVMOD and other upgrading programs.
- Transferring additional amphibious ships (LST, LPD, LSD) to the Naval Reserve and establishing Landing Craft Air Cushion (LCAC) augment units.
- Consolidating Patrol Squadron Augment Units into Master Augment Units (MAU) and making P-3C aircraft and weapon systems trainers available for Reserve use.
- Increasing the Reserve role in the airborne mine countermeasures mission (AMCM).
- Transferring AO-177 class fleet oilers to the Naval Reserve Force, starting in Fiscal Year 1989, contingent upon achieving planned TAO-187 procurement and maintaining required active force levels.
- Establishing two Reserve augment units to support carrier on-board delivery (COD) squadrons.
- Executing Reserve augmentation plans for the Navy's new hospital ships.
- Doubling the number of salvage ships (ARSs) in the Naval Reserve Force.

This year's report to Congress includes several additional initiatives to be considered during update of the Five-Year Program and development of our Fiscal Year 1987 budget request. They are:

- Formation of two supersonic adversary aircraft squadrons within the Naval Air Reserve Force.
- Equipping one of the light attack squadrons in each Reserve Tactical Air Wing with medium attack (A-6E) aircraft.
- Accelerating the commencement of transition to P-3C aircraft to Fiscal Year 1988.
- Consolidation of our Light Attack Helicopter (HAL) and Combat Search and Rescue Helicopter Squadrons (HC) into two new Helicopter Combat Support squadrons (HCS), equipped with H-60 aircraft.

- Establishing two airborne Mine Countermeasure Helicopter (AMCM) squadrons with five RH-53D aircraft each, starting in Fiscal Year 1987, along with plans to procure two merchant ship mobile van complexes to support them at sea.

NAVAL RESERVE FUNDING REQUEST

The Naval Reserve is supported primarily by two appropriations: Reserve Personnel, Navy (RPN) and Operation and Maintenance, Navy Reserve (O&MNR).

The President's Budget also requests over $130 million in the Aircraft Procurement, Navy (APN) appropriation to be used for necessary modifications to Naval Reserve aircraft, plus more than $20 million in the Other Procurement, Navy (OPN) appropriation. The OPN funds are earmarked for various support and training equipments for the cryptological program, construction battalion, special warfare units, and cargo handling battalions.

Further, the Military Construction, Naval Reserve (MCNR) Appropriation request of $51.8 million will provide much needed land acquisition, design, and facilities construction for the Naval and Marine Corps Reserve.

The total funding support requested for the Naval Reserve exceeds $2.5 billion for Fiscal Year 1986.

I would like to discuss the Reserve Personnel, Navy and Operation and Maintenance, Navy Reserve appropriations in some detail.

Reserve Personnel, Navy

The Reserve Personnel, Navy (RPN) appropriation is divided into two budget activities. Budget Activity One provides funding for Unit and Individual Training. Budget Activity Two provides funding for Other Training and Support, including active duty TAR personnel, the Naval Reserve Officer Training Corps, Armed Forces Health Professions Scholarship program, and the Navy Junior Reserve Officer Training Corps. The total Fiscal Year 1986 RPN request is for $1,353.6 million, which consists of $667.3 million for Budget Activity One and $686.3 million for Budget Activity Two.

This funding request will support an average strength of 134,400 Naval Reservists in a paid status, including a Full-time support personnel end-strength of 17,973. This reflects an increase of $197.5 million over Fiscal Year 1985. Included in the Full-time support strength, beginning in FY 1986, are 1,537 Temporary Active Duty (TEMAC) personnel who will support the Naval Reserve recruiting program. Their strength and funding were previously included in the Military Personnel, Navy (MPN) appropriation. This accounting transfer represents $38.3 million of the total increase. Retired pay accrual, which began in Fiscal Year 1985, accounts for $45.5 million of the increase. Full-year funding of the Selected Reserve Educational Assistance, program, or "new G. I. Bill", represents a $9.8 million increase over Fiscal Year 1985. Additional costs associated with the January 1985 and July 1985 pay raises are $35.8 million. Increased Basic Allowance for Quarters and Variable Housing Allowance entitlements amount to $3.4 million. Program growth, discussed below, is $50.6 million.

The average strength of the drilling Reserve and those performing initial active duty training will increase by 6,664 to 112,564. The average strength of Full-time support personnel will increase by 3,231 to 17,488, including the TEMAC program transfer. There is a nineteen percent increase in the number of annual active duty training periods allocated for members of the Individual Ready Reserve who have early mobilization requirements and an eleven percent increase in mandays for school and special active duty for training periods associated with the drilling Reserve strength increase. Reserve incentives will increase by 2.7 million, mostly for anniversary bonus payments to Selected Reservists.

The requested increases will allow the Naval Reserve to comply with Congressional guidance to increase Reserve manning for Naval Reserve Force ships and to continue our growth in Selected Reserve strength to meet mobilization requirements.

Operation and Maintenance, Navy Reserve

The other major appropriation which supports the Naval Reserve is Operation and Maintenance, Navy Reserve (O&MNR). The Naval Reserve is dependent upon funds in this appropriation for support of Mission Forces, Depot Maintenance, and Other Support. Support for Mission Forces includes funds for fuel, intermediate maintenance, repair parts and related support for the operation of aircraft in both the Naval and Marine Corps Reserve. It also includes operating and maintenance funds for Naval Reserve Force (NRF) ships. Depot Maintenance includes funds for the rework of aircraft and engines, the installation of aircraft modifications, and Contractor Engineering Technical Services support. Other Support provides funding to operate and maintain Air Stations, Reserve Centers, and Reserve Facilities supporting Naval Reserve forces and for various command and administrative activities, including recruiting.

The funding requested for the O&MNR appropriation for Fiscal Year 1986 is $954.5 million, which is a $125.7 million net increase over the Fiscal Year 1985 funding level of $828.8 million. Mission Forces (Budget Activity 1) increases $74.3 million, Depot Maintenance (Budget Activity 2) increases $29.1 million and Other Support (Budget Activity 3) increases $22.3 million. Program growth is $103.6 million, $57.6 million of which results from the continued migration of aviation depot level repairables (AVDLRs) to customer funding. There is also a $17.7 million growth which results from the migration of investment items from the OPN Appropriation to support Shore Intermediate Maintenance Activity (SIMA) upgrades and the purchase of Naval Reserve support equipment.

The increased O&MNR funding level will provide required support for the following areas of significant growth: increased aircraft operating and maintenance costs in support of a more modern mix of aircraft and the expansion of the Squadron Augment Unit (SAU) and Master Augment Unit (MAU) programs; $30 million for the installation of F-14A modernization kits; increased operations, maintenance, modernization and outfitting costs resulting from growth in the Naval Reserve Force ASW Frigate Program as four more FFG-7 class ships join the NRF; expansion of the mine countermeasures Craft of Opportunity (COOP) program; enlargement of the Reserve "SEABEE" program by two battalions; and increased training, equipment, and base operating support requirements associated with growing Selected Reserve strength levels as the Naval Reserve builds towards the Navy Manpower Mobilization System (NAMMOS) goal.

Programmatic decreases reflect reduced aircraft engine rework and modification installation requirements, a decrease in ship overhaul funding following completion of USS EDSON (DD 946) overhaul in Fiscal Year 1985, and a $7.9 million decrease in funding Real Property Maintenance. As a result, we still will not be able to meet the Congressional Containment Policy to limit the backlog of nondeferrable Maintenance and Repair to the Fiscal Year 1978 year-end level of $20.7 million.

The O&MNR appropriation increases by $8.3 million to support Naval Reserve recruiting and advertising activities. We need the additional recruiters and support personnel to help meet the strength and quality goals of an expanding Naval Reserve. This appropriation also supports recruiting for the Sea and Air Mariner (SAM) program.

The Naval Reserve Force (NRF) ship operating tempo of 14.7 days per quarter funded through O&MNR remains at parity with previous years. The Fiscal Year 1986 flying hour program is funded at 84.4 percent of the Primary Mission Readiness (PMR) level, a slight increase from the 83.1 percent in this year's program.

SUMMARY

The improvement of the Naval Reserve continues. We are rapidly evolving from a force in reserve to a force in being.

Our ships and aircraft are being modernized at an accelerating pace, thereby improving our warfighting capabilities and our equipment compatability with the active component of the Navy.

Our personnel strength is increasing. We are planning to reach our mobilization manpower requirements by the end of Fiscal Year 1988--a growth of almost 30,000 Selected Reservists in five years.

Our training programs continue to improve and we are providing more support to active units of the Navy as a by-product of Reserve training.

We are adding new missions and refining existing ones through the efforts of the new Total Force advocate on Admiral Watkins' staff.

The strong support for these programs by the Congress, the Secretaries of Defense and Navy, and the Chief of Naval Operations is being vindicated.

The Naval Reserve is truly a force on the move.

MARINE CORPS RESERVE AFFAIRS

STATEMENT OF MAJ. GEN. J.J. WENT, U.S. MARINE CORPS, DEPUTY CHIEF OF STAFF FOR RESERVE AFFAIRS

ASSESSMENT OF PROGRAM

General WENT. Mr. Chairman and distinguished members of the Committee, it is a pleasure to appear here this morning to offer the Marine Corps' annual assessment of its Reserve.

I am pleased to report to this committee and the American people that the Marine Corps Reserve Program is strong. Our Reserve Force is very capable today and vital objectives are being pursued for its future.

With the support of the Congress progress toward achieving these objectives will continue.

Active force capabilities in the Marine Corps are primarily determined by the reponsiveness and deployability required of three active Marine Amphibious Forces [MAF's]. In this context, requirements for regular manpower are driven by peacetime commitments, forward deployments, rapid deployment criteria, and the need for a rotation base.

In broad terms, the Reserve complements this force with a capability to rapidly expand structure by one-third and increase trained manpower by one-half. Considered as a total force, 25 percent of the combat structure and 33 percent of the trained manpower are in the Reserve.

We believe the Reserve is vital to the Corps and the total force is an established reality. Requirements to improve our present and future Reserve capabilities have produced some important objectives primarily in manpower and equipment.

Programs and funding requirements have been developed to ensure continued strength and improvement. The Marine Corps is a unique force with a crucial role to execute in national defense.

Substantial capability held in reserve is truly an added dimension, one in which the Corps has great confidence and takes great pride.

We appreciate the opportunity to appear here today and I will be prepared to answer any questions you may have.

[The statement of General Went follows:]

Statement of Maj. Gen. J.J. Went

Mr. Chairman, distinguished members of the Committee: It is indeed a pleasure to appear before you and offer the Marine Corps' annual assessment of its Reserve.

Since the beginning of the decade, Congress and the Administration have made great strides toward improving the national defense. Reserve programs in general have been strengthened in this process. As tough choices are being debated in developing our course for the next several years, it is important to accurately analyze our current posture and review objectives.

Relatively new to this post and the day-to-day functioning of the Reserve, my analysis has, of necessity, been "zero based." The entire program was examined from a broad perspective. In that context, I am pleased to report to this Committee and the American people that the Marine Corps Reserve program is strong. While there has been routine revalidation, renewal, and some redirection, the objectives are valid and direction is sound. Our Reserve force is very capable today, and vital objectives are being pursued for its future. With the continuing support of Congress, progress toward achieving these objectives will endure.

Total Force and the Reserve's Vital Contribution

The Marine Corps Reserve was established by an Act of Congress and signed into law by President Woodrow Wilson on August 29, 1916. A full partner in the Nation's premier force in readiness, it has been carefully developed as a reserve in the classic sense. With trained units and qualified individuals on call to rapidly augment and reinforce active forces, the Reserve provides our Corps with a valuable added dimension.

Active force capabilities in the Marine Corps are primarily determined by the responsiveness and deployability required of three active Marine Amphibious Forces (MAF's). In this context, requirements for regular manpower are driven by peacetime commitments, forward deployments, rapid deployment criteria, and the need for a "rotation base." In broad terms, the Reserve complements this force with a capability to rapidly expand structure by one third and increase trained manpower by one half. Considered as a Total Force, 25% of the combat structure and 33% of the trained manpower are in the Reserve.

The Individual Ready Reserve (IRR) provides a substantial portion of this trained manpower. Our mobilization assignment system ensures that the skill and experience of these reservists can quickly be assimilated into the force if required. The Selected Marine Corps Reserve (SMCR) contributes trained units, which are organized into the 4th Marine Division, 4th Marine Aircraft Wing, and 4th Force Service Support Group (FSSG). In addition to nine infantry battalions and 18 flying squadrons, these organizations represent 100% of the civil affairs capability, 67% of force reconnaissance units, 40% of the tanks, and much more. Their role upon mobilization will be to:

- Selectively augment the active forces in order to field the three active MAF's at full wartime structure.

- Reinforce the active MAF's with selected units if warranted by threat assessment.

- Provide capability to reinforce with an additional Marine Amphibious Brigade (MAB).

- Provide a full division, wing and FSSG, if "augment/reinforce" is not ordered.

- If "augment/reinforce" is ordered, provide a nucleus to reconstitute a full division, wing, and FSSG.

The last two roles can only be accomplished well after mobilization has occurred. However, the first three are substantially executable today, and current challenges, initiatives, and program objectives stem primarily from those requirements. While our current capability to respond is credible, it must be improved with enhanced manpower, equipment, and training programs. Increased funding will be required; however, investing in the Reserve is sound and the "payoff" substantial.

STATUS OF PROGRAMS

Budget

Funding profiles for the Marine Corps Reserve have paralleled the tempo of change. Increases in both reserve appropriations (Reserve Personnel Marine Corps-RPMC, and Operation and Maintenance, Marine Corps Reserve - O&MMCR) have contributed to increased training, increased readiness, and enhanced mobilization capabilities. Continued advances toward Marine Corps Reserve readiness and wartime strengths are dependent upon maintaining programmed funding levels.

The reserve budget for FY 1985 was previously established at $328.1 million. In the budget currently before Congress, the revised FY 1985 amount of $330.6 million is a net change reflective of several adjustments. There were increases caused by supplemental funding for the military pay raise that became effective on 1 January 1985, the proposed 3% military pay raise effective 1 July 1985, the civilian pay raise of 1 January 1985, and the Educational Assistance Accrual (G.I. Bill) which starts 1 July 1985. These were offset, to a large degree, by a reduction in the Marine Corps Reserve Manpower Plan.

The FY 1986 Reserve budget request of $351.6 million will support both enhancement initiatives and an SMCR end strength of 43,019 (41,900 average strength). This funding represents 4.0% of the overall Marine Corps budget, and a real growth of 1.5%. Listed below is a comparison of FY 1985 and FY 1986 budgets.

TABLE I
FUNDING COMPARISON - FY85/86

RESERVE APPROPRIATION	APPN FY 1985	BUDGET RQ FY 1986
Reserve Personnel, Marine Corps (RPMC)	$271.8M	$290.0M
Operation & Maintenance, Marine Corps Reserve (O&MMCR)	58.8M	61.6M
Total	$330.6M	$351.6M

Within the FY 1986 RPMC Budget, $201.1 million is for pay and allowances, subsistence, clothing, and operational travel for units and individuals during drills, annual training, and initial active duty for training (IADT). We have earmarked $88.9 million for special tour requirements, mobilization training, the Full Time Support (FTS) Program, Incentives Program, Platoon Leaders Course, and the Junior Reserve Officers Training Corps. The RPMC increase of $18.2 million over FY 1985 is necessitated by planned end strength increases within the SMCR and FTS programs. These added reservists are required to support new units, new equipment, and restructuring within the 4th Marine Division, 4th Marine Aircraft Wing, and 4th Force Service Support Group.

The FY 1986 O&MMCR request of $61.6 million provides funds for the day-to-day costs of operations and maintenance. Of this request, $30.3 million directly supports the training of SMCR units. Included are the costs of "expense items" of equipment, consumables, vehicle and airlift support, transportation of Marines and materiel, and local maintenance of equipment. Depot level maintenance of major end items of equipment is funded with $1.7 million. The FY 1986 request also provides $15.2 million for the maintenance and operation of training facilities and administrative support of the SMCR. The remaining $14.4 million pays for administrative support of individual reservists, recruiting activities, and other requirements such as postage.

Significant items in the FY 1986 O&MMCR request include $1.6 million for improved chemical protective suits, $1.3 million for improvements to the Reserve Component Common Personnel Data System (RCCPDS), $1.0 million for the new Kevlar helmet, and $0.9 million for lightweight body armor.

Funding levels described for FY 1986 are critical in our development. The very modest increase in funds for enhanced manpower, training, equipment, and facilities will make a substantial difference in producing a Marine Corps Reserve which is combat ready.

Manpower

From a manpower perspective the Marine Corps Reserve is a vastly improved force over that of the past decade. One significant improvement has been management of the Individual Ready Reserve, the primary source of trained individuals for both active and reserve units upon mobilization. An effective mobilization assignment system and advancements in preassignment programs have been major factors in this development. At the end of 1984, there were over 48,000 Marines in the IRR. By 1990, when the full impact of the military service obligation extension from 6 to 8 years is felt, this number is expected to eventually level at 85,000. A major challenge is continued development of this group of individuals as a viable manpower resource through refresher training, enhanced administration capabilities, and improved mobilization techniques.

The Selected Marine Corps Reserve has also seen significant manpower improvements. Education levels have risen, essentially paralleling the regular Marine Corps. While there has been substantial program growth since 1980, the SMCR manpower plan has recently undergone significant revalidation and some redirection.

In a project aimed at ensuring that each drilling reservist is a mobilization asset, our reserve force was trimmed to 40,619 by the end of 1984 from 42,690 in 1983. Many individuals who did not demonstrate satisfactory drill attendance were transferred to the IRR. Additi~~onally,~~ those who did not have the required occupational specialty were removed from the rolls if they refused retraining. While this has produced a small reduction in end strength (less than 5%) and forced a revision to our manpower plan, significant benefits have been realized in MOS (military occupational specialty) qualification. On the average in 1984, MOS qualification in the SMCR is up 15% over the average for 1983. This represents significant progress in one of the Reserve's major readiness degrading factors.

Another positive aspect of this screening process has been rededication of our efforts towards retention of quality Marines. Gaining and maintaining desired strength levels is vital in any successful program. To complement increased retention, pursuit of manpower requirements has also mandated increased recruiting goals, both prior and nonprior service, and the development of increased opportunities for retraining in needed skills.

A new manpower plan has been developed which calls for modest and achievable growth in the SMCR, averaging 1200 per year. The FY 1985 end strength goal has been revised from 46,447 to 41,757. Our FY 1986 request is for a military end strength of 43,019. Favorable results have been achieved in the first quarter of FY 1985, and accessions are slightly ahead of schedule. While the plan has been revised, our goal of achieving full Reserve wartime strength by 1990 is the same, and in actuality SMCR strength has increased by approximately 5,000 since 1980. With continued pursuit of imaginative training, increased retention, and proper qualifications, the Corps looks forward to achieving its reserve manpower objective.

Another notable aspect of the SMCR manpower program is the increased level of full time support. As a result of the Commandant's direction that active duty manpower growth in the Marine Corps be stabilized, the Reserve Full Time Support (FTS) program has become a most valuable tool. Keeping pace with reserve development, the program is providing full time reserve personnel to assist in organizing, administering, instructing, and training the Reserve. The growth of this program from 803 in 1984 to over 1700 in 1989 accommodates requirements that would otherwise have to be filled by regular active duty Marines.

While the great majority of SMCR individuals train in reserve combat units, there is a program which places drilling Marines on staffs within the active supporting establishment and provides manning for 52 mobilization stations across the country. These mobilization stations are critical to the process of rapidly assimilating the IRR upon mobilization. Referred to as Individual Mobilization Augmentees (IMA), these drilling reservists are becoming key elements of their organizations, as evidenced when they assisted in manning the Marine Corps Command Center during the Grenada operation.

When we consider the issue of countering terrorism, here again the Reserve proves to be a particularly skilled partner. Many reservists, through their government and civilian occupations dealing with law enforcement, security, intelligence, and special operations, have acquired expertise which can be brought to bear on this problem. A symposium, comprised of 30 reservists, met in March and made recommendations on how reserve resources could be used. Some of these recommendations have already been implemented, such as the employment of reserve counter-intelligence teams to assist in providing security during the parade season at the Marine Barracks, Washington, D. C. Also, a data base which lists reserve personnel and their expertise has been established.

Indeed, reserve manpower provides a valuable dimension to the Corps. Individually and collectively, they represent a vast reservoir of talent, experience, and potential combat power. Whether serving on regular staffs in routine duties and exercises, or manning reserve units that will augment and reinforce, these citizen Marines are an essential partner. They are the heart of the Reserve; a valued, added dimension to the Corps' total combat capability.

Materiel and Logistics

Modern combat equipment and materiel readiness are essential in establishing an effective wartime capability. As an integral part of the Total Force, equipment modernization for the Reserve is facilitated by a single acquisition objective which considers both reserve and active requirements. This acquisition objective addresses equipment modernization and includes initial issue quantities for all reserve units, as well as planned sustainability for designated early deploying units through D+60.

While the Marine Corps has always included the Reserve in developing this single acquisition objective, equipment fielding in the Reserve has usually lagged active forces. Funding levels of the past 4 years have finally allowed us to see concurrent fielding. The result is an improved capability to provide trained individuals and units to meet mobilization requirements, conduct realistic training with equipment reservists are likely to go to war with, and integrate effectively with active forces in exercises and actual contingencies.

All major new ground combat systems are being programmed for the Reserve. By comparing active and reserve fielding plans listed below, the Marine Corps' commitment to concurrent fielding in active and reserve units is quickly illustrated.

TABLE II
EQUIPMENT FIELDING FY83-89

Equipment		83	84	85	86	87	88	89
M249 Sqd Auto Wpn	Act			x----	----x			
	Res			x----	-----	----x		
Mk19 40mm Machine Gun	Act			x----	-----	----x		
	Res			x----	-----	-----	----x	
Shoulder-Launched Multipurpose Assault Weapon (SMAW)	Act		x----	----x				
	Res			x----	----x			
9mm Pistol	Act				x----	-----	-----	----x
	Res				x----	-----	-----	----x
M16A2 Rifle	Act		x----	-----	----x			
	Res			x----	-----	----x		
TOW II	Act		x----	-----	----x			
	Res				x----	----x		

Equipment		83	84	85	86	87	88	89
M60E3 Machine Gun	Act			x----x				
	Res			x----	----x			
M198 155mm Howitzer	Act	x----	-----	-----	-----	-----	-----	----x
	Res			x----	-----	-----	-----	----x
Logistics Vehicle Sys LVS (Dragon Wagon)	Act			x----	-----	-----	----x	
	Res			x----	-----	-----	----x	
M939 5T Series Truck	Act	x----	-----	-----	-----	-----	----x	
	Res		x----	-----	-----	-----	----x	
High Mobility Multipurpose Wheeled Veh	Act			x----	-----	-----	----x	
	Res			x----	-----	-----	----x	
M17A2 Gas Mask	Act			x----	----x			
	Res			x----	----x			
Kevlar Helmet	Act			x----	----x			
	Res			x----	----x			

Highlights of reserve ground equipment modernization in FY 1985 and FY 1986 include:

- M198 155mm Howitzer to one artillery battalion
- M16A2 Rifle, MK-19 40mm Machine Gun, M2 .50 Caliber Machine Gun, TOW II, Shoulder-Launched Multipurpose Assault Weapon (SMAW), 9mm Pistol, M60E3 Machine Gun, and M249 Squad Automatic Weapon (SAW) to infantry units
- High Mobility Multipurpose Wheeled Vehicles (HMMWV) to units of the division, wing, and force service support group
- Logistics Vehicle System (LVS) to selected combat service support units of the FSSG

Of the total wartime table of equipment (T/E) requirements, reserve units maintain only a training allowance (T/A) at local facilities. The T/A is approximately 50% of total wartime requirements and represents that amount of equipment which is required for training and can be adequately maintained and stored at local training centers. In this area, the Marine Corps' goals are being met, and over 96% of T/A is presently on hand. The remaining equipment required for mobilization is programmed to be held at Marine Corps Logistics Bases. While these stores are not yet adequate to satisfy total reserve requirements, current programs will essentially eliminate shortages by the end of FY 1988.

Marine Corps procurement funds in the amount of $252 million have been allocated for the Reserve in FY 1985. The FY 1986 request contains a programmed $185.2 million. These funds are respectively 13.7% and 10.7% of the FY 1985 and FY 1986 Procurement, Marine Corps (PMC) Appropriations. The trend indicated by these two percentages is misleading due to the impact of Reserve light armored vehicle (LAV) funding ($116.9M) in FY 1985. If LAV figures are removed, the actual upward trend of Marine Corps Procurement for the Reserve emerges (5.3% in 1984, 7.4% in 1985, and 10.7% in 1986).

TABLE III
PROCUREMENT FUNDS BY COMMODITY AREA

BUDGET ACTIVITY	TOTAL COST FY 1985	 FY 1986
2 - Weapons and Tracked Combat Vehicles	$151.3M	$ 31.6M
3 - Guided Missiles and Equipment	3.3M	-

BUDGET ACTIVITY	TOTAL COST	
	FY 1985	FY 1986
4 - Communications and Electronics	27.2M	35.3M
5 - Support Vehicles	58.5M	76.5M
6 - Engineer and Other Equipment	11.7M	39.3M
7 - Spares and Repair Parts	-	2.5M
Total	$252.0M	$185.2M

As a result of continued Congressional interest in increasing reserve equipment readiness, $380 million in additional funding was provided to the services with the 1985 Defense Authorization Act for procurement of equipment. The Marine Corps Reserve portion of this total was $30 million. Those additional funds are being utilized to alleviate training equipment deficiencies and accelerate planned modernization. The following is a list of equipment to be procured with the additional appropriation:

TABLE IV
FY 1985 "ADD-ON" EQUIPMENT FOR THE RESERVE

ITEM	QTY	AMOUNT ($000)
M936 Truck, Wrecker, 5-ton	50	$9,000
M923/925 Truck, Cargo, 5-ton	103	9,270
Pistol, 9mm	5000	1,675
AN,PRC-113/VRC-83	165	1,950
Meteorological Data System	2	2,400
Tractor,(Full tracked)	20	1,605
Tractor, (Rough terrain) Wheeled	3	351
Refrigeration Unit	22	53
Maintenance Kit, MK-1823	10	100
Reverse Osmosis Water Purification Unit	6	943
Com Equip (Telephone/switchboard/Ant)		1,654
Generators,(60KW/400Hz)(100KW & 10KW/60HZ)		995
TOTAL		$29,996

Continued emphasis on reduction of shortages and introduction of modern equipment in the Reserve component, coincident with the active component, will assure the Reserve capability to support the requirements of the Total Force.

Facilities

Units of the 4th Marine Division, 4th Marine Aircraft Wing, and 4th Force Service Support Group reside at 186 training sites in 45 states, the District of Columbia, and Puerto Rico. One hundred and forty-five (145) of those sites are shared with the Navy or other services. The remaining 41 sites are either owned or managed by the Marine Corps.

Many of these facilities are of World War II vintage, and upgrade is an issue of long standing. Eighty of the 186 training centers are in need of replacement or renovation. Sixty-five are identified as unfunded projects in the Military Construction Naval Reserve Program (MCNR). The size of the MCNR appropriation from FY 1983 to FY 1985 has averaged $39 million. Concurrently, however, the backlog of projects has increased for the entire MCNR program from $407 million in FY 1983 to $709 million in FY 1986, a growth of 74% in 3 years.

The Marine Corps is certainly receiving its fair share of the funds provided. The MCNR appropriation, however, simply is not large enough to do the job. While we recognize that the ratio of MCNR funding to MCNR backlog is similar to the level of Military Construction (MILCON) funding to Military Construction backlog, the MCNR backlog is a vital issue with a broad impact on the Reserve's ability to recruit, train, and retain quality Marines. Resolution of this shortfall will be addressed in the development of future budgets.

STRUCTURE MODERNIZATION AND ENHANCEMENT

Ground

The Marine Corps total force planning process embraces equipment modernization and structure development. This planning has resulted in certain structure changes within the 4th Marine Division and Force Service Support Group. During FY 1985, the artillery regiment will reorganize one of its three direct support battalions to accommodate receipt of the first M198 155mm towed howitzers in the Reserve. Also, a second civil affairs group will be activated in Los Angeles. The Reserve has 100% of the Corps' civil affairs capability and plans are to eventually establish a third civil affairs group, which will be sufficient to support each of our three active Marine Amphibious Forces. Two salvage platoons will be activated in FY 1985 to complement one existing platoon in the 4th FSSG. This capability is also resident only in the Reserve. A second air naval gunfire liaison company will be activated this year in West Palm Beach, Florida, whereupon 67% of that capability will be in the reserve component. The first reserve unit to be activated in Alaska will stand up in 1985 as a division reconnaissance company in Anchorage. This will provide the Marine Corps with a much improved opportunity to conduct operations in an arctic environment. Additionally, an air delivery platoon will be activated in Savannah, Georgia, to complete structuring of the 2nd Beach and Port Operations Company which began in FY 1983.

Several extremely important SMCR activations will occur in FY 1985 that will significantly improve Reserve medical and dental capabilities. In late FY 1985, Medical Logistics Company-4th Supply Battalion, three medical companies of the 4th Medical Battalion, and all of the 4th Dental Battalion will be activated. At that point, the structure of the 4th Supply and Dental Battalions will be complete. The 4th Medical Battalion will also be complete except for two companies which will be activated next year. Also in FY 1986 a sensor control and management platoon (SCAMP) will be activated in Mobile, Alabama.

A light armored vehicle (LAV) battalion will be activated in FY 1987. It is anticipated that this battalion, consisting of approximately 960 Marines and 110 vehicles, will be distributed over five states. Four TOW platoons are also scheduled for activation during 1987. One will complete the structure of the Anti-Tank Company, 4th Tank Battalion, and the remaining three will be placed in each of the three infantry regiments.

A target acquisition battery will be added to the 4th Marine Division during FY 1988, providing the Division with a greatly enhanced capability to acquire and attack enemy targets. Also in 1988 and continuing into 1989, the 4th Division's remaining two direct support artillery battalions will receive M198 howitzers and reorganize accordingly.

Aviation Modernization and Enhancement

In terms of aircraft modernization, plans are also developed in terms of our Total Force. Even while active squadrons are being modernized, there is presently a substantial degree of commonality. Among others, aircraft such as the F-4S, CH-46E, UH-1N, AH-1J, and KC-130F are all being flown by the active force as well as the Reserve. Nevertheless, planned modernization of the Reserve is very important. Though updated and very capable models are being received from the active force as they receive new aircraft, existing reserve inventories are aging, and there are acknowledged shortages, especially in aerial refuelers and attack helicopters.

Our modernization plans provide newer and more advanced F-4S's and A-4M's in reserve fighter and attack squadrons as they become available. Our goal is to upgrade with the Hornet and have an all F/A-18 reserve fighter/attack force with the transition beginning in 1991. As OV-10D's become available, they will be added to the observation squadron. There will be a mix of A and D models for a period beginning in FY 1988, and eventually an all OV-10D inventory in both active and reserve squadrons.

In our last prepared statement to the Congress, we described a planned exchange of heavy/medium helicopter structure in FY 1992 (1 heavy/2 medium transitioning to 2 heavy/1 medium). Requirements have been reexamined, and that transition will not occur. Present plans are to modernize the heavy lift helicopter squadron, which is currently flying the CH-53A aircraft, with the CH-53D in FY 1992. Two 12-plane CH-46E squadrons will continue to provide medium lift capabilities for the Reserve until FY 1998/99, when they will transition to the MV-22A, Osprey. Of our three utility squadrons, two fly the UH-1N, while the third squadron has six of the older UH-1E helicopters. In the course of bringing reserve attack helicopters to 24 aircraft in FY 1988, the UH-1E squadron at Glenview, Illinois, will transition to the AH-1J, Cobra.

The Reserve currently has one squadron of KC-130's. This squadron is partially configured with the newest KC-130T. Costs of the phased stand-up of a second squadron and deployable intermediate maintenance activity (IMA) at Stewart Air Base, New York, are being identified. While these costs do not appear in the FY 1986 budget, our strategy is to develop these costs in FY 1987 planning. The addition of a deployable intermediate maintenance capability for the Reserve is critical to attaining the ability to independently deploy a reserve Marine Amphibious Task Force (MAGTF). Timely stand-up of the squadron and IMA at Stewart in concert with anticipated completion of construction during the 4th quarter of FY 1987 is heavily dependent on continued Congressional support.

While there are extensive challenges, reserve squadrons are consistently demonstrating that they are up to the task. One example is the designation of VMFA-112 in Dallas as the Marine Corps 1984 Fighter Squadron of the Year. This competition included all fighter squadrons, active and reserve, F-4 and F/A-18 alike. Also, three reserve squadrons have assumed active contingencies during the F/A-18 and AV-8B active force transition schedule. These are indicators that, in aviation combat capabilities as well as ground, the Reserve is an integral partner within the Marine Corps Total Force.

TRAINING AND READINESS

Essential for a combat ready ground and air structure is the combination of manpower and equipment into an effective training program. Active/reserve integration is the dominant theme, and our efforts are directed in two areas. Collective training is very important, and our emphasis is on unit performance within a Marine Air-Ground Task Force (MAGTF). Concurrently, it is vital to effectively complement this collective training with programs aimed at the professional development and military occupational specialties of individuals.

Training for Individuals

Two programs contribute most to the training and mobilization potential of individuals from the IRR. The Exercise Support Program provides small detachments and individuals the opportunity to participate in major exercises under the cognizance of FMFLant and FMFPac. Two highlights in this program for 1985 are as follows: 17 individuals from the IRR will augment a Joint NATO staff in London, England, for exercise WINTEX-CIMEX; and 150 reservists from the IRR will support exercise TEAM SPIRIT by deploying to Korea as part of the III Marine Amphibious Force. In addition to giving valuable support to the active staffs involved, this training is invaluable to the enhancement of an individual reservist's mobilization potential.

The Reserve Counterpart Training Program (RCT) is also designed to provide officer and enlisted personnel of the IRR an opportunity to train with their active duty counterparts. It complements the exercise support program by focusing on training within job skills (MOS) while conducting routine duties. The RCT program is scheduled to expand and will become a primary vehicle to support refresher training of the 8-year obligor as those requirements emerge.

Another focal point in our training program for individuals is increased levels of participation in professional development schools. These opportunities provide career, intermediate, and senior-level schooling for Reserve officers in the SMCR and IRR similar to that offered for regular officers. Reservists attend the Marine Corps Amphibious Warfare School and the Marine Corps Command and Staff College, as well as the Naval War College. Candidates from the grade of warrant officer to colonel are designated by selection boards to ensure that the most qualified individuals attend. The program is expanding from 861 in 1984 (62% SMCR, 34% IRR, 4% FTS), to 902 in 1985 (54% SMCR, 41% IRR, 4% FTS), and to over 1200 in FY 1986.

Training and Readiness of Units

For units as well as individuals, the same expertise and proficiency in command and control, fire support coordination, amphibious planning, and fire and maneuver expected of the active force is also expected of the Reserve. These skills are continually refined through exercise participation. A cycle of training is maintained which includes, among others, combined arms exercises, cold weather training, and amphibious landings. Over 25,000 reservists gained the benefit of participating in 14 major exercises during 1984. Highlights of the FY 1984 exercise schedule were combined arms exercises (CAX) at 29 Palms, California, cold weather training abroad in exercise COLD WINTER and TEAM WORK, and a major reserve amphibious exercise - PHALANX SOUND II - conducted by 2d Marine Amphibious Brigade.

The 2d MAB was activated in 1979, and its elements are spread over a substantial geographic area. Until recently, training was largely conducted as individual units and staff groups. In 1983 the 2d MAB headquarters element conducted a command post exercise (CPX) at Camp Lejeune, North Carolina. That exercise, PHALANX SOUND, was the first opportunity for the 2d MAB headquarters to function as a centralized staff. Based on lessons learned from the CPX, the MAB staff began planning for an amphibious exercise. In August of this last year, under the command of Brigadier General Sangalis (USMCR), 2d MAB conducted a highly successful amphibious exercise with over 7000 reservists participating. Rear Admiral Rogers, Amphibious Task Force Commander, observed at the conclusion of PHALANX SOUND II that "...by forming that essential Navy/Marine partnership and following established doctrine, the concept of Total Force amphibious operations was verified. You have won our utmost respect."

Training a reserve MAGTF is a valuable tool. It lends credibility to the Total Force concept, and provides a vehicle for peacetime training activities. Developing plans around a reserve MAGTF gives focus and direction to employment and equipment planning for the Reserve. While much has been done, there is still progress to be made. The concept, however, is valid and the Marine Corps will forge ahead in its efforts toward developing a fully capable Reserve MAGTF.

Another feature of the annual exercise schedule is reserve unit participation in the Marine Corps Combat Readiness Evaluation System (MCCRES). Reserve units are routinely assessed with the same criteria used to evaluate active force combat capability. While the results of these tests are primarily intended for the use of unit commanders, insight as to the success of our training programs can be gained by comparing evaluated readiness between 1981 and 1984. Of units tested both years, 54% were judged combat ready in 1981, while in 1984 all were assessed as being combat ready.

In addition to tactical expertise, another aspect of reserve readiness is being prepared to mobilize. This facet is routinely assessed and exercised from an overall perspective by participation in JCS mobilization exercises. Most recently, during exercise POWDER RIVER 84, the Marine Corps actually moved units and individuals to their gaining command through designated stations of initial assignment. Some units and individuals, mobilized for POWDER RIVER, actually participated in exercise BEAR HUNT overseas. Complementing this system at the unit level, the 4th Marine Division and 4th Marine Aircraft Wing conduct what is known as a Mobilization Operational Readiness Deployment Test (MORDT). Again, comparing MORDT results of 1981 and 1984 is particularly instructive. Of 95 different units tested in both years, 81% were evaluated as being ready in 1981, while 94% were judged ready just last year.

Training and readiness of the Marine Corps Reserve is at a high state. There are substantial challenges in years to come, especially in the area of developing MOS skill training in the SMCR, geared toward the time available for a reservist to train, and tailoring refresher programs for the IRR. While there is progress to be made, our training programs have consistently yielded excellent results. Reserve units and citizen Marines are as ready today as at any time in history to integrate into the Nation's force in readiness and contribute effectively.

CONCLUSION

The Marine Corps Reserve is a vital added dimension to the Corps' Total Force. High morale and the dedication of its Marines are major strengths. Requirements to improve our present and future capabilities have produced some crucial objectives, primarily in manpower and equipment. Our approach towards achieving these objectives can be summarized in a three-pronged strategy.

First, we must continue our substantial efforts in recruiting, training, and retaining quality Marines. This must be a broad based emphasis which is reflected in all aspects of the program, from compensation to imaginative training. Modern facilities are also extremely important. One of our great challenges is the maintenance of desired strength levels in the face of a declining, eligible manpower pool. Meeting this challenge will require not only careful manpower management, but also adept leadership, creative training programs, and a skillful balance of incentives. With the proper environment, the Reserve can deliver what is expected.

Second, the momentum of our force modernization effort must continue. State of the art equipment and modern training facilities are extremely important. In addition to upgrading capabilities, they heavily influence the recruiting and retention of personnel. This may be the most important factor in establishing the Reserve as a credible combat force.

A final key to enhancing Reserve capabilities is continued emphasis on active/reserve integration. From the headquarters staffing process to units in the field, it is the essence of what the Reserve is about. Mobilization is ultimately active/reserve integration, and it is appropriately the dominant factor in reserve planning. The Marine Corps has a good system for accomplishing this integration. More reservists are involved in active force training than ever before. Major program sponsors in the Marine Corps wear a reserve hat as well as active, and the office of the Deputy Chief of Staff for Reserve Affairs is included at every level of decision making. The salient point is that the mechanism is in place, and we are making it work.

Total Force, with separate but complementary active and reserve contributions, is a vital, established reality in the Marine Corps. Programs and funding requirements have been developed to ensure continued strength and improvement. The Marine Corps is a unique force with a crucial role to execute in the national defense. Substantial capability held in reserve is truly an added dimension, one in which the Corps has great confidence and takes great pride.

AIR FORCE RESERVE

STATEMENT OF MAJ. GEN. SLOAN R. GILL, U.S. AIR FORCE, CHIEF, AIR FORCE RESERVE

CURRENT STRENGTH OF AIR FORCE RESERVE

General GILL. Thank you, Mr. Chairman and members of the committee.

I would like to thank you for the opportunity to appear before the committee and also to thank you for your previous support of the Air Force Reserve.

I have submitted my statement for the record. I will quickly summarize.

I am pleased to tell you the Air Force Reserve is stronger than ever. All units can be mobilized within a 24-hour period, deployed in 72 hours, all flying units are combat ready with the exception of two which have a large number of aircraft in depot maintenance, mostly C–130A's.

Our recruiting has been excellent. For the seventh year in a row we have exceeded our floor. Our retention is the best ever. A lot of this is due to the targeting incentives that have helped us achieve those.

We have had the largest build in the Air Force Reserve this last year with a build of over 4,500 personnel. It is going to be tough, but we do expect to meet that goal.

FORCE MODERNIZATION

We are continuing to modernize our force with C–5's, with C-141's, F–16's, KC–10's in the associate mode and also with the C-130H's that were added by Congress last year. These 8 C–130's will allow us to retire some older C–130A models, leaving us with 48 of the C–130A's with an average age of about 28 years.

SUPPORT UNITS

I also would like to tell this committee that most of my build next year is in the support arena. We have over 400 support units. Most of those are civil engineering, medical and aerial ports.

In summary, I would like to say the Air Force Reserve is fulfilling its peacetime role and ready to accomplish its wartime role.

[The statement of General Gill follows:]

STATEMENT OF MAJ. GEN. SLOAN R. GILL

Thank you for the opportunity to appear before this committee to present the Air Force Reserve program for FY 1986.

I am pleased to report that the Air Force Reserve attained an end strength of 70,318 in FY 1984, exceeding our programmed end strength of 69,880. All of our units are well-manned, well-trained, and capable of mobilizing in 24 hours and deploying within 72 hours. The keys to this effectiveness have been, and continue to be, modern equipment, meaningful missions, dedicated personnel and the strong support of the active force. These factors have instilled a sense of importance and pride of accomplishment in the performance of our mission around the world. Overall, the Air Force Reserve is stronger than it has ever been.

As of January 1985, all but two of our equipped flying units were combat ready. Both of these squadrons have a large number of aircraft undergoing depot level maintenance.

Each of the three KC-135 tanker squadrons remains in combat ready status and has crews standing daily alert. All six of our strategic airlift wings were combat ready, as were our two KC-10 tanker/cargo units. In FY 1986, we will begin operation of the third KC-10 main operating base (MOB) at Seymour-Johnson AFB, North Carolina. As with the existing KC-10 units, the Air Force Reserve associate program will provide one-half of the total aircrew force for the KC-10 at Seymour-Johnson. This year the Air Force Reserve will begin providing maintenance manpower at KC-10 MOBs to provide wartime surge flying hour capability for the KC-10 force.

The Air Force Reserve is continuing to pursue modernization of its airlift and fighter forces. This year we will activate our first equipped C-5 strategic airlift unit at Kelly AFB, Texas. In FY 1986, we will operate five C-5 aircraft while continuing to train our people. Then in FY 1987, as new C-5s are procured, we will continue to build the unit to its full complement of 16 aircraft. Placing C-5s in the Air Force Reserve will reduce their peacetime flying cost and extend their service life because we will fly them less than the active force.

In FY 1986, we will also establish our first C-141 equipped strategic airlift unit by converting our C-130E unit at Andrews AFB, Maryland to C-141s. The C-141 has long been the backbone of the strategic airlift fleet and we are proud to expand our mission to the equipped role. We will provide 100% of the aircrews and maintenance personnel for our equipped strategic airlift units while continuing to supply 50% of the aircrews and 40% of the maintenance personnel for the C-141s and C-5s in the associate fleet.

On the tactical airlift side, we will expand our only C-130H unit from six to eight aircraft in July 1985 with the delivery of the two aircraft purchased for us in FY 1984. The FY 1985 procurement of eight additional C-130Hs will allow us to retire eight of our older C-130A models. The remaining 48 C-130A aircraft that we operate will average 28 years of age and are programmed to remain in the inventory until the mid 1990s when they are to be replaced by C-141s and newer C-130s transferred from the active Air Force inventory as a result of the purchase of C-17s. This is a workable plan but is obviously contingent upon timely procurement of the C-17. If the program is delayed, it will be very expensive, if not impossible, to maintain these 1950s technology C-130s. To preclude this from happening, I urge Congress to fully support the C-17 program to eliminate existing airlift shortfalls and provide replacements for our A model C-130s.

Our fighter force remains constant in FY 1986 with 216 aircraft. In FY 1987 we will begin to receive 24 production line F-16 C/D aircraft at Luke AFB, Arizona. The F-16 and A-10 help to keep the average age of our fighter/attack force down, but the F-4D is still the mainstay of our force. As a result of Congressional interest and appropriation actions last year, we will be able to increase the combat capability of these forces with the installation of low smoke engines and off-boresight AIM-9 missile capability. However, as with the C-130 fleet, our continued modernization depends on the procurement rates of new aircraft. Any cutbacks in F-16 and F-15 procurement levels will dictate that some of our F-4D aircraft remain in our inventory even longer than the currently programmed early 1990s. Our concern is that a gradual extension of force life does not allow proper leadtime for required modifications to the F-4 and early model F-16 forces to keep them viable against the threat of the late 1980s and early 1990s.

In the area of combat support and mission support activities, there are over 400 Air Force Reserve support elements. Many of these units, as part of their training activities, make significant peacetime contributions which assist in keeping the peacetime costs of the Total Force to a minimum. The Air Force Reserve provides 64 percent of the aeromedical evacuation units and 25 percent of the Air Force's tactical hospitals and clinics. Currently, Reservists contribute almost 60 percent of the aircraft battle damage repair capability with personnel in six Air Force Logistics Command gained combat logistics support squadrons. Also, the Air Force Reserve provides approximately 20 percent of the Air Force civil engineering force and equipment and 50 percent of the aerial port squadrons. The majority of our combat support build from FY 1985 to FY 1986 is in the civil engineering force.

In addition to our unit program, the Air Force Reserve has a successful program to provide trained individual mobilization augmentees (IMAs) to active force units upon mobilization. IMAs are members of the Selected Reserve and are assigned to specific positions established in active force organizations and are trained and supervised by the active force. IMA requirements are identified by grade and skill as part of the annual wartime manpower planning process of the Air Force.

We finance our force structure and programs primarily in two appropriations. These are the Reserve Personnel, Air Force appropriation and the Operation and Maintenance, Air Force Reserve appropriation. The Reserve Personnel appropriation provides for the pay and allowances of reservists during their active and inactive duty training periods, while performing special tours of active duty, and while undergoing school training. This appropriation also includes funding for Reserve personnel called to full-time active duty for training, administration and recruiting of the Air Force Reserve program. In addition, this appropriation includes the military personnel costs of students enrolled in both the Senior and Junior Reserve Officer's Training Corps (ROTC) programs and students participating in the Armed Forces Health Professions Scholarship Program (HPSP). These programs are not managed or controlled by the Air Force Reserve, however, their costs are included in this appropriation. The FY 1986 request for this appropriation is $622.5 million which is an increase of $39.6 million over the FY 1985 current estimate. This growth reflects the large requested increase in strength levels, +2,571 end strength and +2,700 average strength. Our first equipped C-141 unit, the full year impact of FY 1985 aircraft conversions, and new aircraft in FY 1986 account for a large part of the requested increase in personnel. Also, additional requirements in mission support capability to meet wartime taskings are reflected by increases of 208 aerial port aircraft loading and transportation personnel, 115 aeromedical evacuation personnel, and 1,026 civil engineering specialists to provide for field messing and battle damage repair of facilities and runways.

The Operation and Maintenance, Air Force Reserve appropriation provides for the day-to-day operating expenses of Reserve bases and units including the pay of civilian personnel, aviation and ground fuels, depot maintenance, real property maintenance, supplies and other expenses required to carry out the Reserve mission. This appropriation increases in FY 1986 by $26.4 million of which $29.0 million is price growth and $-2.6 million is program growth. If the FY 1985 Congressional adds for JT3D reengining ($+56.0 million) and F-4 upgrade ($+1.0 million) are taken into account, the real program growth in FY 1986 is $54.4 million. Requested program increases are the result of a full year's operation of the C-5 aircraft conversion that occurred in FY 1985 plus additional units and mission changes to enhance readiness and wartime capability. The increases in FY 1986 occur in C-5 Strategic Airlift ($+19.7 million), KC-10 Tanker Cargo ($+11.4 million), A-10 Tactical Fighters ($+3.1 million), F-4 Tactical Fighters ($+2.6 million), C-141 Strategic Airlift ($+2.0 million), F-16 Tactical Fighters ($+1.2 million) and Civil Engineer, Aerial Port, Combat Logistics Support, Aeromedical Evacuation and Medical Service Units ($+3.0 million). Depot Maintenance program growth ($+8.3 million) is related to the addition of more modern, sophisticated aircraft to the Air Force Reserve inventory and increased structural repairs on the aging C-130 fleet. Increased base operating support and real property maintenance requirements support the more modern aircraft inventory and the continued expansion of the Air Force Reserve ($+2.8 million). These increases are offset by the one-time FY 1985 program costs to reengine KC-135 aircraft with JT3D engines and to modify F-4D Aircraft with low-smoke engines and AIM-9 off-boresight capability ($-57.0 million).

The requested growth continues to recognize the ever changing needs of our national defense and provides the Air Force with a better equipped, more operationally oriented Air Force Reserve that can be mobilized immediately.

In summary, while the war-fighting and readiness role of the Air Force Reserve continues to be an important element within the Total Force, we will continue to modernize our equipment, effectively accomplish operational mission requirements, and recruit, train and retain the people needed to ensure we are ready to fight at any time.

This concludes my statement, Mr. Chairman. I will be glad to respond to questions.

GENERAL QUESTIONING

Senator **Stevens**. I came in late. Senator Rudman or Senator Stennis.

Senator **Rudman**. Thank you, Mr. Chairman.

I am going to ask one question at this point and then I will be happy to yield to the other people since I asked a few questions previously.

My question is directed at the representatives of the Air Guard and Air Reserve. I guess I will ask General Gill a question first.

FIGHTER AIRCRAFT IN AIR RESERVE

Other than the transport aircraft which are flying right now in the Reserve, what are the fighter aircraft that you are flying in the Reserve?

General **Gill**. I have approximately 100 F-4D's and 100 A-10's in the inventory. I also have my first F-16 unit at Hill Air Force Base, UT. They have just attained their combat readiness. They got their first airplane in February of last year.

That is pretty much my fighter force. We are doing some modernization on those F-4D's by putting low smoke engines on them and also some off boresight capability which was supported by Congress last year.

Senator **Rudman**. My question should be directed to both General Conaway and General Gill.

F-20 TIGER SHARK

In regard to the issue of the F-20, the Tiger Shark, which, of course, has been the subject of some debate for some time, last week Dr. Wade pointed out that decision had been made, it was a business decision or business judgment, he said, there were many questions about the wisdom and judgment used in that decision.

Since you are the people who are the eventual users and if you want to give personal opinions rather than official opinions, you are free to do so.

I wonder if you think the F-20 is capable, considering the cost differential between that and the comparable F-16C, whether or not it ought to be looked at again. Certainly there are cost savings involved and from the tests I have seen a great deal of comparability there.

I would like to hear your comments on that point. I would have to add we don't build aircraft in New Hampshire. My interest in the F-20 from what I have seen is that it is a very capable aircraft developed by a company with its own funds and it is having a hard time getting off the ground, not certainly figuratively, but literally.

I wonder if someone might want to comments on the F-20. The difference, I understand, is many millions of dollars. I understand General Dynamics did lower the price greatly for the Navy aggressor force. I think that the F-20 ought to get an award just for that.

Let me hear your comments on the F-20.

General **Conaway**. From the Air Guard point of view, in my opinion, the F-20 is a capable and outstanding aircraft. It is in the F-16A class, or F-16C, and is a very cost effective aircraft.

An aircraft like the F-16 could be used in the air defense role as well as possibly in close air support role. The competition, I think would be excellent with the F-20 competing to help reduce the Air Force cost.

The Air Force is looking at this. They are definitely interested in competition. Right now we are interested in staying with the current procurement of F-15s and F-16s.

The dilemma we get into and the reason for a lot of the increased attention to an airplane like the F-20 is perhaps we are buying more of the upper half of the high-low mission of fighters. We are starting to build the F-16A's and we will have the F-15E's and F-16E's which are needed for our total force.

At the same time the Air Guard is faced with 70 percent of the air defense. We are modernizing our continental air defense force of 11 squadrons.

At the same time we want to continue modernizing the tactical fighter force and worldwide fighter force with the number of aircraft we are procuring. We are having trouble getting there from here. We are working with the Air Force and OSD on what do we enhance and what do we buy in new aircraft.

To answer your question, it is an outstanding aircraft with superb life cycle cost and great capability.

LOW MAINTAINABILITY OF TIGER SHARK

Senator RUDMAN. It has low maintainability in terms of the estimate of cost of maintenance on that aircraft.

General CONAWAY. Yes. It has very low maintainability.

Senator RUDMAN. Which would be particularly important to the Guard and Reserve units?

General CONAWAY. Yes, sir. However, we would still need some full-time manning. We have to have technicians and AGRs.

We have more F-4's coming into our force. Even though we have a few F-15's and F-16's, the F-4 is a very maintenance intensive aircraft. We are getting that high end of the high cost of operation.

So, our full-time manning is going to go up. We may not want to do it, but it is coming with the aircraft being assigned.

Senator RUDMAN. You are buying those new airplanes, but those buying the others are buying the personnel cuts.

General CONAWAY. That is right. The F-16's turn the corner. If we have enough of the F-16's, our full-time manning goes down. If you combine F-16's and F-20's, we go down at a faster rate in both drill strength and full-time manning.

We can't help right now what is happening to us.

CLOSER LOOK AT F-20

Senator RUDMAN. It is my understanding that the Guard really is very anxious to see the Department look at the F-20 very closely.

Is that being pursued?

General CONAWAY. The Air Force is looking at it and we are looking at it with them. We are very interested in it. If there is a chance for increased procurement or competition, we are very interested in bringing the price down like what happened during the engine competition in the Air Force.

That can only benefit all of us with more aircraft and more modernization. Whether it is more F-16's or F-20's, we need more of the lower cost fighter aircraft with high reliability and high maintainability.

PER UNIT COST OF F-20

Senator RUDMAN. The F-20 is in the $12 to $13 million range, the F-16 historically is in the $16 to $17 million range. There is quite a difference there. For 100 F-16's you can get 108 or 110 of the others.

I am just interested if this is being pursued.

General GILL. I pretty much agree with my counterpart. We have looked at the F-20. It is an excellent airplane. Its life cycle cost you mentioned, the cost of maintenance is outstanding.

The Air Force in the 1986 budget did not put that in the POM. I think we are all working that problem. I think that using the F-20 to compete maybe in the future years would certainly be the way to go.

One of the things I might add, sir, is the fact that some of the comments have been that the Guard and Reserve take the F-20 by ourselves and we have said that we don't want aircraft that are not handled by the active duty because we tend to get into a unique situation where logistic support for them is very difficult.

FINANCIAL ANALYSIS AND CAPABILITY OF F-20

Senator RUDMAN. I would like to request for the record from both General Conaway and General Gill if you will detail your position on this in terms of financial analysis and capability, and so forth.

I am concerned that we may end up, if we don't see some of these things bought for our own Air Force, this aircraft may not be available and we may have lost an opportunity.

General GILL. I will furnish that.

[The information follows:]

F-16's AND F-20's

My position continues to be that the F-20 is a very capable and cost effective fighter aircraft. The Air Force is continuing its cost analysis. It is an ongoing process because, besides procurement costs of the aircraft, all associated overhead costs such as spare parts, maintenance, training and additional support equipment must be weighed carefully. As you know, a logistics infrastructure is already in place for the F-16. We would have to establish the same structure should procurement of the F-20 become reality. Also on the cost side, what we have seen so far on the F-20 is for the basic aircraft. Equipping the F-20 to the comparable level of capability found in the F-16C would increase costs.

With this in mind, let me say that either the F-20 or more F-16s in the Air Force Reserve inventory would increase our war-fighting capability. We have proven we can fly and maintain the F-16; we have no reservations about our capability to fly and maintain the F-20; and based on current projections, we should be able to do it a little cheaper and with less manpower than the F-16.

The Air Force is studying the potential role of the F-20 in the force structure, as well as its impact on fighter acquisition strategy. The F-20 was considered, but rejected in the 1986 budget due to higher priorities. However, because the F-20 is proving to be a first-rate fighter comparable to contemporary US first-line fighters, procurement of the F-20 is being restudied in the preparation of the 1987 budget. I think we will find the F-20 a very capable aircraft for either the air defense or air-to-ground mission.

Analysis has shown that with contractor supplied logistics, the F-20 would be less expensive to operate than any fighter currently in the Air National Guard inventory. In terms of capabilities, the F-20 compares favorably with the F-16 and would be a suitable replacement aircraft to modernize our Air Defense Forces. However, we prefer that if the F-20 is introduced into the inventory, it should be operated by both the Active and Reserve Forces.

RESERVE PERCENTAGE OF BUDGET

Senator **Stevens**. Senator Stennis.

Senator **Stennis**. I never fail to have an interest in the hearings on the Reserve. I want to point out, though, that I am disappointed here in the overall budget request, Mr. Webb. Despite the increase in the current budget that we are considering now, much of your Reserve items here are a very small percentage.

I have been on the committee a good while. I remember the days when you had very little equipment that you could call useful and usable. It was largely worn out and had to be replaced. For the last several years you have come forward tremendously.

I want to quote, Mr. Chairman, from the DOD National Guard and Reserve equipment report which is an official document. Page C-2 states that in 1984 the Army identified 500 Reserve component units that did not have sufficient equipment to allow meaningful peacetime training. Since that time, the report states with the training equipment allowance approximately 120 of these units have been filled.

The question is, What is being done about equipment to allow the remaining 380 units to get meaningful training?

[The information follows:]

Equipment Shortages

As noted in the equipment report, the Army's initial attempt to deal with shortages of equipment for Reserve Component training indicated severe deficiencies in approximately 500 units. An update to that information is that all 500 of the units essentially will have their problems resolved by the end of fiscal year 1986. Now the Army is beginning a second phase of its Minimum Essential Equipment for Training [MEET] Program.

Each Army National Guard and Army Reserve unit is being directed to identify the 10 items most essential to the accomplishment of the unit's mission, and to determine the number of each item required for unit training. Minimum levels of equipment required for training will be established, shortages identified, and appropriate actions indicated. This survey is being established as an annual requirement; the initial survey is planned for review at Headquarters, Department of the Army, during the June-July, 1985 timeframe.

RESERVE PERCENTAGE OF BUDGET

Mr. **Webb**. I can give you some of my reactions right now.

Senator **Stennis**. All right.

Mr. **Webb**. First of all, with respect to the percentage of the budget, if you include the procurement accounts which come through the active appropriations account, we are at 6.3 percent of the budget in fiscal year 1986. We had a spike last year because of a large equipment add on that came from the Congress.

Previous to that we were 5.4 percent in fiscal 1984 and 4.9 percent in fiscal 1983 and less than that in the years before. So, we are putting a lot of equipment, and a lot of money into the Guard and Reserve.

As I mentioned before you appeared, we are putting in last year and this year more than $18 billion worth of equipment, either procured or flow-through good equipment from the active side.

We do have a problem in compatibility. We have a problem in communications equipment and there is a problem also in the area of training equipment.

Senator **Stennis**. The official report states that 500 Reserve components do not have sufficient equipment, but that 120 of them have been filled.

What is being done about the equipment to allow the remaining 380 units to be so treated?

That is the question. That is what we are going to pass on when we write up this bill.

Mr. **Webb**. With regard to training equipment per se, rather than overall equipment, equipment needed in training areas, the cost to fill those requirements is $119.5 million. Of those listed requirements, all but approximately $68.5 million of the total program will be filled by the end of fiscal 1988.

Another area that we are working on is in the area of compatibility to make sure that the training equipment is the sort used in the operating areas. We are working with the Army on this.

MINIMUM ESSENTIAL EQUIPMENT FOR TRAINING PROGRAM

The Army has a program called Minimum Essential Equipment for Training which began last year. It identified these 500 items that you are talking about.

Senator **Stennis**. Excuse me, please. I don't want to take too much time. You need all the money then that is requested officially in the budget? You need all that for the purposes indicated; is that correct?

Mr. **Webb**. Yes, we do.

Senator **Stennis**. If I may refer to General Walker for a minute.

General Walker, you have heard my statement here about the differences in the conditions. Let me ask you about what is being done about these 380 units to put them in a meaningful training position?

I am talking about ordinary equipment now.

General **Walker**. Senator, I can't identify those units specifically for you this morning. I can tell you generally what is being done.

First of all, as the Secretary just mentioned, the Vice Chief of Staff of the Army has implemented a program known as the Minimum Essential Equipment for Training. He has in that program directed the Army National Guard and the U.S. Army Reserve to submit a list of equipment required for training.

Equipment is being redistributed within the total Army from whichever component has quantities of equipment it can afford to give up to the component which does not have mimimum quantities required for training.

Let me give you some figures regarding distribution of equipment to the Army Guard. In fiscal 1984, we were given almost 800 million dollars' worth of equipment. In 1985 we are projected to receive slightly over 1 billion dollars' worth of equipment. In 1986 we are projected to get 1.2 billion dollars' worth of equipment.

We are getting equipment. As I said earlier, not all we want and not as fast as we would like to get it, but we are beginning to get those things that we have wanted for a long, long time.

CONGRESSIONAL SUPPORT OF ADD-ON EQUIPMENT

Senator STENNIS. Are you getting what you need?

General WALKER. Yes, sir.

I have to add this: The Congress has been good to the Reserve components in the add-on equipment you have given us.

I know in the case of the National Guard we have always coordinated our list of equipment to be procured with the active component, in the case of the Air Guard, the Air Force and in the case of the Army Guard, the Army. That has been very valuable equipment in improving training and readiness.

Senator STENNIS. Of course, you expect money in the same manner that you get it in the current budget and future budgets?

General WALKER. If you want to give us money in this budget, yes, sir, we would handle it as we have in the past.

Senator STENNIS. Gentlemen of the committee, let me say this. Within the last several years I have made special visits among the Reserve units, some in my own State and beyond. I have been very pleased with the high quality, the dedication, the activity, and the know-how of the personnel involved. That applies to the old ones, those in in-between years and the young ones. I have to add both young men and young women. It gave me a youth concept, a realization of what is being done.

The money side in the military budget with its growing size every year has convinced me we are going to have to turn somewhere to effectively find a substitute for some of the regulars and the regular program.

I am greatly encouraged that we have already started in that direction with our Reserves, with the personnel quality and quality of equipment being supplied. It is a new start from what I have observed heretofore, and I have been interested since the Korean war.

I am ready in every way I can to stand behind here and support you and get what you need—and not a dollar over what you need—but get the amount of money that will give you what I call respectable equipment.

One time it is said the equipment had the factory paint on it. I want to see it continually emphasized.

That is all I have, Mr. Chairman.

Senator STEVENS. Thank you very much, Senator Stennis.

You all never had a greater friend than Senator Stennis. When we get behind the doors of our staff, when we start marking up this bill every year, the first thing he says is what have you done for the Reserves and what have you done for the Guard? He puts them first.

Mr. Secretary, let me ask a few questions. We are like the marines, we need a few good men up here, too. You might think of joining us up here.

END-STRENGTH PROGRAMMING

We have a report that says you have 99.5 percent of your programmed end strength for 1984. You project 100 percent in 1985.

Why do we need increased recruiting and retention incentives with a record like that?

Mr. **Webb**. It is getting harder every year, Senator.

Senator **Stevens**. When I first came here I remember sitting here and listening to the fact we had 75 and 80 percent. You are at 95 to 100. Now you want more recruiting and retention bonuses.

Mr. **Webb**. If I may analogize, it is kind of like birth control; the probability of a bad incident increases rapidly when you cease to take the necessary precautions.

We built over the past several years a system of incentives, improvement and also a good feeling in the country that makes military service attractive. Now we have people talking about a declining age cohort pool on the nonprior Service side.

We have higher retention on the Active Forces and that is drying up our market in the flow from the Active Forces.

We had a very rough time last year making the end strength. Sometimes it was close to divine intervention that enabled some of those numbers to be met. We have been approaching it through a number of different ways.

One is to retain the incentive programs we have and we have some contingency funding in the budget where we propose to increase the ceilings that are in existing law.

Another way is through increasing the recruitment programs. The advertising programs themselves have fallen flat for a number of years. We are afraid if we don't approach this all three ways, recruiting, advertising, and incentives, that the result will be disappointing.

EDUCATION CASH BONUS PROGRAM

Senator **Stevens**. Let me be specific. You are asking for extension of the 5-year education cash bonus program. We have almost a $100 million GI bill program.

Do you need both of them? Aren't they redundant?

Mr. **Webb**. The only extension of the old program would be to pay out the people who currently are in the old program.

Senator **Stevens**. You would phase out the one if the other comes in?

Mr. **Webb**. Yes, sir.

WEEKEND INCENTIVE PAY

Senator **Stevens**. What about this $40 to $50 weekend incentive pay for our friends in the Navy?

The admiral mentioned that. Isn't that the beginning of a new Reserve-wide incentive pay program that will again be a redundant incentive?

I am worried about the bonuses we pay people to stay in the active service. If you get better bonuses in the Reserves, there is going to be a drainage out of the active service.

Mr. **Webb**. I will let Admiral Kempf address that in detail. I will say two things.

One is that we believe there should be some sort of reward for the individuals that go to sea. We are trying to get a higher mix of full-time people that operate the ships that we are putting into the Naval Reserve fleet. We are putting good ships in.

Today you have about a dozen of the ships in the Naval Reserve fleet that are part of what is now the 560-ship Navy.

Senator **Stevens**. I understand. My question to you is suppose we give it tomorrow and the next year he will wind up for the other Reserve units.

Isn't this just the beginning?

If we do give it to the Navy, won't we have to do the same thing to the other Reserve units in order to achieve the strength you want?

DRILL PAY WEEKEND PROGRAM

Mr. **Webb**. My belief is that the drill pay weekend program for the Navy, which is what you are addressing, is actually a situation of catchup ball. We give people flight pay when they fly. These are unique individuals inside the Navy in that they go to sea for the whole time that they are on inactive duty training. It is a justifiable exception.

Senator **Stevens**. Suppose you file a recommendation for one group and give him one, two, or three battle groups. They all get $40 to $50 for every 3 days at sea?

I don't know when we start training for the swamp, Admiral.

Admiral **Kempf**. What brought this about, is the need for authorizing an incentive for what is spoken of as hard to man units. If passed, it will apply to all service Guard and Reserve components including the Navy.

The problem is that we are getting modern ships in the Naval Reserve and we are having difficulty getting selected reservists to drill on a ship that goes to sea Friday afternoon or Saturday morning and does not get back until late Sunday night. They would rather be in a unit that gets two drills on Saturday and are off that night and then drill twice more on Sunday.

It is only trying to fill an area where we have difficulty in getting the required personnel; $10 a drill actually is what we are asking for. We did a study to determine whether $12 or $15 a drill would do it better. The Center for Naval Analysis says the knee of the curve is $10 per drill for enlisted personnel. We think that this will help our manning of NRF ships considerably.

Otherwise, we are fearful as we grow to a 26 modern frigate Naval Reserve, we will have a difficult time manning them with the selected Reserve we need.

VARIABLE HOUSING ALLOWANCE

Senator **Stevens**. I remember asking the question about the variable housing allowance when it first came before this committee. It was defined as being payment that was going to be made only to those people in uniform who lived in areas of extremely high cost and would be paid in addition to the basic allowance and quarters.

I am sure you understand that 99.5 percent of all people in uniform get the variable housing allowance—it happened within a 2-year period—living off base. I am talking about those living off base.

I am sure you have very legitimate objectives, but my feeling is that if we start that, there isn't anyone in the Reserves who wouldn't be a hard billet to fill if they didn't get the same pay these other guys get.

Admiral KEMPF. No, sir. I am only asking for $800,000 in fiscal year 1986 to pay this incentive. I am going to do it selectively, only where we need it. I don't intend to get it out of balance. It is really the minimum, we feel.

Senator STEVENS. I am very serious. I personally would be very much more in support of something that rewarded people who had a drill record, of having had, you know, 12, 16, 18 months of attendance and participation in activities like this where it would be selective and be a reward for continued performance rather than payment per weekend for specific people or payment per event for specific people throughout the service.

In the first place, it will be an accounting nightmare.

Admiral KEMPF. They will only get it if they actually drill. So, it is not an entitlement.

Senator STEVENS. I know that you drill once, you get it, if you don't drill the next week, you don't get it. It would be an accounting nightmare.

I would like very much to assist in this, but I see this special DOD-wide incentive pay concept that is on an individual performance basis and doesn't reward continued performance or excellence.

If we could find some way to do that, I would like to talk about it. I think you have a good idea and I think we ought to assist you to meet your end strength and to hold them, as the Secretary says. You are up there now and you ought to hold them.

Admiral KEMPF. We are not "up there" in the frigates.

Senator STEVENS. The variable housing allowance covers the very high rental areas of the country. It swamps us.

PROCUREMENT FUNDING

Senator Stennis mentioned the problem about the allocation of dollars for procurement. I understand the response. But the fact of the matter is we do have an estimate before us this year of $1.2 billion for Reserve and the Guard as compared to $1.7 billion. That is for total manpower.

We have a request for 1986 of $20.2 billion and last year you had a $20.4 billion. It was down $200 million in terms of a total amount. When you figure the amount we added in conference last year for procurement, that is an understandable thing.

You have an increase here and if you look at the internal budget, you are up from $5.7 billion in terms of operation and maintenance to $6.1 billion. We see a steady increase in O&M costs for Guard and Reserve.

I think when you really look at it, the major gap is 7.9 for Reserve and Guard personnel and now we are over 9.08. We are going up steadily and a 14-percent increase in compensation already in Guard and Reserves with a decrease in the overall budget.

I think we ought to look hard at anything that will add special pay considerations as far as the Guard and Reserve is concerned. That does not really reward continued performance and this 100-percent retention category. Those are the areas we would like to find a way to maintain if you are going to have additional incentive pay.

FRIGATE PROBLEM

I understand your frigate problem. If you want a DOD-wide amendment to take care of the frigate problem, I don't think it will take care of the retention problem and the incentive to maintain the 100-percent level in these units.

I think any units that maintains 100-percent attendance for a year, they are all entitled to a bonus. I think Congress would support that. Next year you have enough money to pay them because you could do it under that amendment, could you not?

Admiral **Kempf**. Not with $800,000, no sir. I would be delighted to discuss it. We do feel unit incentive pay is important.

Senator **Stevens**. Senator Sasser.

Mr. **Webb**. Mr. Chairman, may I make clarification for the record in case something I said was misunderstood?

When I said that we were phasing out the educational incentive program with the GI bill coming in, I did not mean to imply that we were going to phase out the other incentives.

Senator **Stevens**. I understood that.

Senator **Sasser**. Thank you, Mr. Chairman.

NATIONAL GUARD UNITS IN TENNESSEE

General Conaway, my home State of Tennessee has three Air National Guard units. In Knoxville, TN, we have the KC-135 tanker, as you are aware. They have been reengined, which I think has greatly improved their performance.

In Nashville and Knoxville we have C-130's. Now, I did a review of the C-130A bomber. I did a recent review of the C-130's based in units throughout the country and have learned that my State of Tennessee has the oldest C-130A bombers of any other State in the union.

There are 16 C-130A models in Nashville and 8 of the A models in Memphis. So, my question to you is: What are the plans of the Air Force National Guard to modernize these aircraft bases?

General **Conaway**, Senator Sasser, you are correct. We have a little over 40 C-130A's left in the Air National Guard. Twenty-four of them are in the State of Tennessee.

Nashville with 16 C-130's is in the program to be modernized into the strategic airlift arena. That is still being worked.

We are trying to work something for the Memphis unit, but that has not been finalized yet. So, we are trying to work in the strategic airlift arena for both of those units. Those two units had a great history up until about 8 or 9 years ago in the strategic airlift role when they both flew C-124's.

So, we in the Air Guard look again to strategic airlift for them. Right now we are not ready with any official announcement. We are working with the Air Force on that.

I can discuss that later with you if you would like. That is the plan.

KC-135 REENGINING PROGRAM

Senator SASSER. I am very eager to see that Memphis gets some C-5's. I intend to discuss this with the Secretary of the Air Force, Mr. Orr, to see if that can be done in an expeditious manner.

I think Nashville would be a good place to put C-141's, with the history of that unit there.

The Congress has approved the KC-135 tanker reengining program. I have seen that program in my State. I have seen how it stands with enhanced capability when it is reengined.

How is this program proceeding?

General CONAWAY. Under the KC-135 reengining program, 99 of our 104 aircraft have been reengined. There was a bid opened recently. We are working with the Air Force to finalize the contract so that we can get on with our remaining five aircraft.

General Gill's 21 Air Force Reserve aircraft are tied into this same bid that has just been received. So, there are 21 of his for a total of 26 aircraft remaining to be reengined. We anticipate a contract by the Air Force to be let within the next month or two. We have gotten behind in that due to getting authorization and appropriation language squared away. We think that is on track, and the Air Force is proceeding with the contract.

Senator SASSER. Are there any plans to increase the number of KC-135's assigned to Knoxville?

General CONAWAY. There are no plans at this time.

F-20 TIGER SHARK CAPABILITY

Senator SASSER. Following up on questions that Senator Rudman asked earlier, I think you have a very high opinion of the capability of the F-20 Tiger Shark manufactured by Fairchild.

General CONAWAY. Yes; it is a very capable plane, first class.

Senator SASSER. If the Air National Guard purchased F-20's, what mission would be assigned to it?

General CONAWAY. If the Air Force procured the F-20 and consigned it to the Air National Guard, probably the first place we would use it would be in the air defense mission since we have 70 percent of the total continental air defense mission. It has full-up system capability. That would be a good use for it.

Senator SASSER. I take it that the performance characteristics of the F-20 are very competitive with those of the F-16?

General CONAWAY. They are very comparable to the F-16A.

Senator SASSER. You are getting the F-20 for 10 or 15 percent less than the cost of the F-16?

General CONAWAY. I believe it is somewhat in that area.

If anything like this were to be pursued with the competitive process, it would obviously help the entire Air Force and Department of Defense like it has the Navy in their procurement.

Senator **Sasser**. If the F-20's were used to replace the older F-4's, do your have any figures, any estimate how much would be saved in cost of the aircraft?

General **Conaway**. We can provide some of those. It is less than half the operating cost of an F-4. Probably it would operate close to a third of the cost of an F-4.

Our F-16 operation is about half the cost of an F-4. So, we really get into some cost savings that you can amortize over the life cycle between now and the turn of the century if we get into the state-of-the-art fighter.

COST SAVINGS OF F-20

Senator **Sasser**. Would you furnish for the record, General Conaway, an analysis of the cost savings that might be achieved if the F-20's replaced the F-4's?

General **Conaway**. I will, sir.

[The information follows:]

F-20 Cost Savings

Using the best available Air Force cost figures and Northrop Corp. estimates, the annual operating costs for an 18 PAA Air Defense Squadron are: $23.8 million for the F-20 and for the F-4, $38.9 million.

INTRODUCTION OF C-5'S TO NASHVILLE AND MEMPHIS AREAS

Senator **Sasser**. General Conaway, I am very, very interested in seeing that these very old and obsolescent C-130A's that are being operated out of Memphis and out of Nashville are replaced. Memphis, then, is the logical place for C-5's if they are going into the Air Guard.

I understand that they are in a very short period of time. The soldiers are there. It is a good location for them. The personnel are there and eager to operate those.

I would like to have a discussion with you at some point to see what can be done about moving those C-5's to them.

General **Conaway**. I will. Our first C-5 unit is announced for Stewart Field, NY. They will receive their first aircraft this month for training.

We are discussing with the Secretary of the Air Force a second location for C-5's and Memphis certainly is a leading candidate for that, but no decision has been made.

Senator **Sasser**. Do you have any idea when the decision will be made?

General **Conaway**. I would hope this year. Whether we go with another C-5 unit to be announced this year or next year, I am not sure. I would hope this year from our standpoint so we can get on with plans and preparation.

PREPARED STATEMENT OF SENATOR LEAHY

Senator **Sasser**. Mr. Chairman, I have a statement from Senator Leahy that I would like to submit for the record dealing with the Army and Air National Guard facilities in Vermont.

Senator **Stevens**. Thank you.

[The statement follows:]

PREPARED STATEMENT OF HON. PATRICK J. LEAHY, U.S. SENATOR FROM VERMONT

Over the past year, members of my staff and I have spent considerable time at the Army and Air National Guard facilities in Vermont. Through these visits, I have identified what I consider serious shortfalls in equipment needed by the men and women in the Vermont Guard to carry out their mission as the first line reinforcement for our troops in Europe.

Thanks to my friend and colleague Senator Levin, I was able to submit a number of questions during hearings of the Senate Armed Services Committee earlier this month. Yesterday I received the replies.

After a preliminary review of the responses provided by the Department of the Army, I think many are incomplete and unsatisfactory. Because of pressing business in Vermont, however, I have not had the opportunity to prepare follow-up questions to explore some of the issues that have been left unanswered.

Today I would simply like to inform Assistant Secretary Webb that within the next several days, I will be submitting additional questions in an attempt to ensure that some of these shortfalls can be remedied.

REQUEST FOR SUBMITTED QUESTIONS

Senator STEVENS. Senator Kasten.

Senator KASTEN. Thank you, Mr. Chairman.

I would like to pursue this F-20 question also.

Senator STEVENS. Pardon me, Senator Andrews did come in and had a series of questions he would like to ask the Secretary to respond to. They will be inserted in the record at the conclusion of the hearing.

AIR FORCE STILL STUDYING F-20

Senator KASTEN. If I understand where we are right now, the two of you agree that this weapon system is a capable system, it would work in your effort toward modernization and the overall budget would be less, not more, if we shifted to F-20's?

So, everyone says it is a good weapon system, we want it, and it would be cheap. Although it is efficient, and it would be better, you are not asking for it.

Is that right? Why aren't you asking for it?

General CONAWAY. The F-16 basically meets that also. The F-20 is more cost effective than the F-16, but both are light years ahead of the F-4's we have. The F-4's still capable, but it requires a lot of manpower and parts.

The Air Force looked at the F-20. It did not fit in the 1986 program. They are still looking at the F-20.

Senator KASTEN. How many years has the Air Force been looking at this?

General CONAWAY. I think for the last year or so they have been looking at it seriously. Since Air Force is procuring F-15's and F-16's, they appear to be very interested in the competition, particularly in the lower end of the high-low mix where they need more quantity of aircraft.

I think there is some real interest. They need the F-16's and F-15's.

Senator STEVENS. This has been of real interest to all members of the committee and we have all been contacted, I have been, by the Adjutants General in our States.

MODIFICATION OF A-10 ENGINES

Senator **Kasten**. It has been brought to my attention that the Air Force has a program of roughly a half billion dollars which is to modify engines for the A-10. It has also been brought to my attention that this may be unnecessary because of the problem of the management program which started in 1983. The Wisconsin Air Guard has been working with this.

Do any of you know anything about this program to modify the engines for the A-10?

We have a letter from Robert Reed, Assistant Vice Chief of Staff, saying that the management program the Guard is working with is in fact successful and will achieve the same result as the A-10 engine modification program.

This is one place where you have a half billion dollars in the budget that evidently is not needed.

If everyone agrees, somewhere in here we are going to have to find a place in the budget for the beginning of these F-20's.

I don't expect you to know about that particular detail.

General **Conaway**. The management program that Brigadier General Hoff at Madison has instituted with his innovation has helped immensely to extend the life of these A-10's. They do need some engine modifications. How much of that can be saved, I am not knowledgeable to say.

A-10 MODIFICATION SUCCESSES BY GENERAL HOFF

That program will have to be done and immediately started because we do have an A-10 engine problem in the total Air Force. Brig. Gen. Dave Hoff's program is helping to extend that so that we can stay combat ready with the majority of their units. It is not that his program will last forever.

General **Walker**. Let me add something about Dave Hoff, too.

This is not the first time this man has come up with an innovative idea. Last year he on his own spent money out of his pocket to modify the A-10's in Wisconsin. That modification eventually was accepted for the Air Force at a great saving to the Government. I think he needs recognition, you need to know about that, this whole committee needs to know what this man has done.

Senator **Kasten**. A number of these people are my friends in the Air National Guard and I am proud of the work that the Guard and Reserves are doing in Wisconsin.

COMPATIBILITY OF WEAPONS SYSTEMS

Mr. Webb, General Gill, in response to a question from Senator Rudman, said that we have to be cautious about putting a weapon system in the Guard which is not in the regular Service. There are problems in terms of compatibility.

Are there not a number of weapon systems in the Guard right now that are not in the regular Services?

I am not sure if he is saying that is a good idea. I would like to see the F-20 come in the regular Service, too.

Do you agree or disagree with what he has said?

I don't think that is a good reason not to go forward with the F-20's.

Mr. **Webb**. The F-20 aside, Senator, there are weapon systems in the Guard and Reserve that, as a general rule, we try to get out, like the old DUSTER, the antiaircraft weapon.

In talking with Adjutants General in the various States, it does seem to create a problem when the weapon system that goes into the Guard and Reserve is an out-moded system, having to track down spares, buy them under private contract and this sort of thing. One of my deputies, Bill Jones, was Adjutant General in Georgia for 8 years and I have had extensive discussion with him on this subject.

There are unique situations where it would not be that kind of problem. One thing about the Air Reserve forces is that they have a very high operating tempo, and real (world) missions. If a single weapon system were to be assigned to them and it was a good dynamic system in an area where they have this kind of operating tempo, I don't think you would have the same kind of problem we are trying to get rid of elsewhere.

I would agree it would be much better if you brought a new weapons system in if it were also in the active service.

Senator **Kasten**. I hope you will all be concerned. It is not just our Adjutant General, but there has been a frustration on the part of many of us watching the F-20 program not work, and not work because of what some people look at as a reluctance of certain people within the Air Force system.

We think it should work. We think we should make this work. Frankly, I am hopeful that David Hoff's experience, that if we are able to get some F-20's, that might be a place you would look in terms of going forward with the three or four wings that are being proposed right now.

I would like to ask one other question.

Senator **Stevens**. Will you yield?

AGGRESSOR SQUADRONS

We thought we had settled it 2 years ago when we put in money for the aggressor squadron in the DOD budget that the F-20 would be purchased. That did not happen. There is still a role for aggressor squadrons in the Reserve and Guard vis-a-vis the Air Force, in my judgment.

I think we are all disappointed that this company went forward to develop this aircraft for export. The reason it is not being exported is that you are not going to use it. What country in the world will buy a plane that we don't want to buy for any force in our Department of Defense?

That is the great defect, they are not going to buy something we are not buying for ourselves.

Senator **Kasten**. I think you can sense this is a concern that we have.

DEFENSE SYSTEM ACQUISITION REVIEW COUNCIL

A suggestion is noted in the March 25 Defense Magazine regarding the idea that the Assistant Secretary of Defense for Reserve Affairs should sit on the Defense System Acquisition Review Council.

My understanding is that this effort would be to ensure or at least work toward improved acquisition of weapons in the review process for the Reserves.

I can understand the reason for this suggestion because our Reserve forces make up around 40 percent of the U.S. Armed Forces manpower. Clearly, the record of all of you at this table is exemplary.

Do you believe that would make sense and sitting in your position do you see this idea as an opportunity to promote Reserve capability without hindering our current active military forces?

Mr. Webb. First, I would like to make a point I made in my overall statement. If you look at the expansion of input that our office has had since the position was elevated by the Congress, we have gone from participation on five DOD level boards, councils, and committees, to 44 in one year.

We have been able to put the Reserve Affairs input onto the day-to-day policy-making apparatus of the Department of Defense.

I sit on the Defense Resources Board which is probably the most crucial board that we have in the Department of Defense to evaluate policy and budget items.

I have no personal opinion about a chair on DSARC. I know that I have been invited to sit in meetings in just about every area that I have asked.

I will be happy to explore that a little bit and report back to you.

Senator Kasten. Thank you.

PREPARED STATEMENT

Senator Stevens. We now have a statement from Senator Byrd along with questions that will appear in the hearing record. The statement will be inserted at this point in the record. The questions will appear at the conclusion of today's hearing.

[The statement follows:]

Prepared Statement of Hon. Robert C. Byrd, U.S. Senator From West Virginia

Mr. Webb, General Conaway, on February 24, 1984 in my office, I discussed the matter of a "Land Use Master Development Plan" for the Air National Guard facilities at Charleston and Martinsburg, West Virginia, with General Chambers who at that time was General Conaway's deputy.

Subsequently, on March 23, 1984, at a joint Appropriations/Armed Services Committee hearing, I questioned General Chambers about this matter, and he indicated his support for the formulation of such a plan. I also discussed the possibility of additional C-130 aircraft at each of the West Virginia sites and the prospects of more modern aircraft such as the C-130H, for the West Virginia bases.

Senate Report 98-500, accompanying the Omnibus Defense Authorization Act, 1985, dated May 31, 1984, included language, incorporated at my request, indicating that the Armed Services Committee strongly supports the "Land Use Master Development Plan" for the Air National Guard bases at Charleston and Martinsburg, West Virginia, as ". . . the best way to accelerate the full utilization, development, and expansion of these bases, including the receipt of additional aircraft, should they become available."

Senate Report 98-567, accompanying the Military Construction Appropriation Bill, 1985, dated July 26, 1984, also included language, at my request, endorsing the

"Land Use Master Development Plan" for the Air National Guard at Charleston and Martinsburg, West Virginia.

Since then, I have been notified by the Air Force and the Air National Guard that (1) the 130th Tactical Airlift Group at Charleston is scheduled to convert their C-130E models to the newer C-130H models in July 1986; (2) the 167th Tactical Airlift Group at Martinsburg will be expanded from 8 to 12 C-130B aircraft beginning in October 1986, with the associated increase of 29 full-time positions and 68 military drill authorizations and several millions of dollars in new construction; and (3) both the Charleston and Martinsburg locations are undergoing a "Comprehensive Land Use and Development Master Plan" which was placed under contract in September 1984 with an architectural review scheduled in April 1985 and a completion date in late 1985 or early 1986.

I ask that the latest communication in this regard from General Conaway be published in the record at this point.

Hon. ROBERT C. BYRD,
U.S. Senate,
Washington, DC.

DEAR SENATOR BYRD: As follow-up to your meeting with Gen Chambers in Feb 1984, and after your testimony in March before the Joint Armed Services Committee giving support to the Air National Guard, I wish to take this opportunity to update you on action initiated which affects our West Virginia units.

The initial actions involving West Virginia Air Guard unit equippage changes are well underway. The 130 Tactical Airlift Group at Charleston is scheduled to convert their C-130E models to the newer C-130Hs in July 1986. Additionally, I would like to take this opportunity to confirm the buildup of the 167 Tactical Airlift Group from 8 to 12 C-130B aircraft beginning in October 1986. This will result in an increase of 29 fulltime employees and 68 military drill authorizations. Your strong interest in these two superb units has helped immeasurably in making this a reality.

Both Charleston and Martinsburg locations are undergoing a Comprehensive Land Use and Development Master Plan which was contracted in September 1984. The architectural review is scheduled in April 1985 and engineering development will continue throughout the year.

I am pleased that the President's FY86 Budget provides funding of a fire suppression system ($1.4 Million) for Charleston facilities. Likewise, at Martinsburg a fire suppression system ($.8M) and parking apron ($1.9M) to resolve an existing shortage are also included in the FY86 budget. To support the increased number of C-130s at Martinsburg, $3.3M in construction for apron and jet fuel system will be incorporated into the conversion program.

Your continued support of the Air National Guard is appreciated.

Sincerely,

JOHN B. CONAWAY,
Major General, USAF,
Director, Air National Guard.

F-20 ACQUISITION BY DOD

Senator STEVENS. Senator McClure.

Senator MCCLURE. Thank you, Mr. Chairman.

I share the statements that have been made by several here that we are really hopeful that there will be a place in the armed forces for the F-20 acquisition.

If we really expect R&D to go in the private sector without totally being funded by the Federal Government, we send an awful signal when a company spends its own money for R&D and develops a very adequate weapon system and then we don't procure any of it.

What other corporate board will assign their resources for development with that kind of background?

I think it is extremely important to our military providers that we send them a strong signal that instead if they are successful in independent R&D, there will be reward, not a penalty.

STRENGTHENING OF GUARD AND RESERVE UNITS

I also reflect the genuine pleasure that I feel is shared by many up here that the Reserve and Guard component is being strengthened. I think any analysis of manpower over a projected conflict would indicate that the Warsaw Pact edge becomes most notable when it comes to their ability to replace front line troops the first, second and third times as compared to our capacity to do the same thing.

There is no edge to that. It is an overwhelming superiority in that field. We must strengthen Reserve components.

I am afraid, however, if we are not careful, if we look at Reserve and National Guard components, we begin to integrate them so fully, they are no longer really backup, they are a kind of a separate unit of equivalent readiness and count exactly the same. Then if we do that, we have not really closed that gap with the Warsaw Pact. We have only counted our readiness in a different way.

ROUNDOUT UNITS OF GUARD AND RESERVE

That question aside, it is my understanding that the National Guard and Reserves are going in two directions. They have the roundout combat units which will be fully equipped, ready to go. Then we have some light combat divisions which are supposed to be ready to go, but are not fully equipped.

Am I correct?

Mr. **Webb**. First of all, my reaction is to say the good news is that the roundout units are given a high priority for equipment. That has been the policy.

General **Temple**. I believe Mr. Webb has set the tone in that the policy for equipping the reserve forces is based on first to fight is first to be equipped. The roundout units, you recall the Congress' direction to the Army, would deploy with their active components to fight with them side by side.

Because of that, it is essential that available resources be placed in the roundout units very early. Given the relative scarce resources that are available to distribute, that is how they are distributed.

DIVISION DEPLOYMENT

Regarding your question about divisions, that is correct, they are somewhere toward the end of the deployment schedule and the resources which are valuable to them have not been arriving.

If you look out into the subsequent years, probably 1987 is the first time you see significant increases in resource distribution to those divisions.

Senator **McClure**. It is not necessarily a question of quality, but availability of resources?

General **Temple**. That is right.

Senator **McClure**. It reflects a $40 billion shortfall?

General **Temple**. No, the Army Guard equipment shortfall is approximately $1 billion and obviously satisfaction of the bulk of that shortfall would provide for the equipment needs of our later deploying divisions.

Senator McClure. I am concerned, I am sure you are, with the progress that has been made. The nature of this boost up here is don't tell me what is good today, tell me what you have not done today.

I don't want to fall into that trap. I am recognizing the progress you have made and commend you for it and share in the gratification that it has happened.

Secondly, we must focus on what has not been done and why it has not been done if indeed we really do intend that these light divisions be ready to go, they have to be equipped. If they are not equipped, we are kidding ourselves.

Senator Stevens. Could I interrupt right there?

I have to go. I appreciate your courtesies.

Senator Rudman will conclude the hearing. I do have some questions that I will submit.

Mr. Webb, I would hope one of these days we can get your staff to come up and have lunch with the subcommittee and just go over on sort of an informal basis the direction that the Guard and Reserve programs have been taking.

Mr. Webb. I will be happy to do that.

General Temple. Senator, if I can reply to your statement, your point is well taken, that not only is it essential for the early deploying units to have equipment, but also for the later deploying units.

General Walker talked about the necessity for training. Perhaps it is more significant when you look on the capability of the units to deploy and fight because the kinds of equipment we need are not going to be able to be produced during the period from the time the conflict begins until the time we are going to have to mobilize those divisions to fight.

We need to train the soldier to use it. I am not telling you your responsibilities, sir, but suggest to you that you have to give them the tools to do the job.

Senator McClure. Others might resent that statement, but I do not. Your are right, it is our responsibility. I accept that statement in the sense that it was given to us.

MANPOWER COSTS

One of the reasons we have pushed, obviously, toward enhancing the Reserve and National Guard is that they are much less expensive to maintain. Forty-four percent of the defense budget is manpower. Manpower costs in the Reserve and National Guard units are a lot lower than they are in regular units.

We get more bang for the buck by strenthening the Reserve in the National Guard units. I know that you gentlemen agree with that, particularly, Mr. Secretary, I appreciate that. We must stress again if we want readiness and we have limited capacity to pay for readiness, we should put our resources where we get the greatest effect out of the dollars that are spent.

I think equipping greater numbers of National Guard and Reserve units gives us a greater capacity to respond immediately than spreading the same dollars over regular components.

Am I not correct?

Mr. **Webb**. Yes, sir. I gave some figures earlier about the amount of equipment that we are putting in. It is a priority item. It has been for several years.

The figure that I mentioned before is in the last 2 years we have put $18 billion in procurement of new equipment and for good quality flow-through equipment.

I would also like to say that I am very concerned about the first part of your statement with respect to our manpower density. The people that we have available are very good, high quality people. I visited them in the field before I came to this job, did a lot of journalism with the military.

I have the highest accolades for them. At the same time there are not very many of them. We have the Soviet military apparatus that has 4.6 million people on active duty.

What you said about the follow-on forces is very important. Under the Total Force policy, and it has worked, our Guard and Reserve forces are integrated with the active force so that they no longer are strategic Reserve forces. Which is the point you made.

Without conscription, we do not have a flow of people that will come through. When we first addressed the concept of the volunteer system, the presumption was that our active force would be between 2.75 and 3 million and drilling Reserves would be three-quarters of a million.

We have continually scrubbed these missions. If it does not fit in the active or Reserve, then we must put it in civilian manning. We have 2.16 million in the Force and, more than a million in the Selected Reserves.

I fear if we scrub too much further, we will be in danger of not meeting our operational commitments as they exist.

On the other hand, we may be straining our active duty forces to the point that they are just going to give up. I see this particularly in the Sea Services.

UNIVERSAL MILITARY SERVICE

Senator **McClure**. I appreciate your comment. I think that it is our success in integrating the National Guard units that imposes the difficulty. It is often the case that success poses another problem. I think we are going to have to address that question, what are truly the reserves behind the ready forces?

We as a nation have not done that. I don't know how we are going to do it. I suspect there is no sentiment for universal military service in this country, but I am for it.

It didn't hurt me a great deal, although I didn't particularly enjoy it while I was there and did not offer to make it a career. I don't think it hurt me any.

If replicated by the millions in this country, it would give us the kind of really standby Reserves that we will so badly need if we get into warfare, but do not have. Our research is attriting there more rapidly than anywhere else. I have no illusions that World War II retread will be able to go out and do any foot-slogging. That is still where battles are won and territory is held.

I suspect the same thing is true of the Korean veterans. We have several million who have been trained and are experienced in Vietnam who could in time of emergency be called upon. We have no structure to do that. We may have to increase that structure.

I want to ask just one question with respect to Senator Rudman's plan.

As you know, and as all of you have had a chance to see it, it is an alternative for some other choices that might be made with respect to budgetary restraints, to constrain the application of manpower, change its character.

Have the Reserve components looked at what their role might become if the Rudman plan were adopted by the Congress as the law of this land?

It seems to me that the reserve components and Air National Guard components might well be called upon to pick up some of the slack if that plan is adopted and we could do so with substantial dollar savings.

Mr. WEBB. As a general comment, what I just said a few minutes ago is my principal concern, and that is that the total manpower is so low. I have two questions concerning the Senator's plan.

One is the size of the force and the other is the force structure itself. It would be interesting to separate those out and address them in different ways.

Again, the greatest concern I have is the size of the force. Although it is a very expensive force under the volunteer system, it is about as trim, in my opinion, as we can get it unless we should alter our commitments.

The other question is a much more interesting one. It would take a lot of time to address it at this moment.

General WALKER. As I said earlier, history backs me up in this when I say that I think the Guard, Army and Air, can accomplish any mission you want it to accomplish as long as we are properly resourced. Don't give us additional missions if we are not resourced. That is where we have been criticized in the past.

I have to also say that I cannot recommend and I could not endorse any plan to cut back active component missions to the point where we reduce their ability to react and react early and quickly. When I say that, I am saying we must keep our components in balance.

GUARD AND RESERVE OFFSET OF PERSONNEL COSTS

Senator McCLURE. I don't question that. Let me redirect your response a little.

I am not asking you to endorse the Rudman plan or to comment whether it is good or evil.

What I am really wondering is is there a place for the Reserve and Guard components to offset some of the personnel reductions to increase our strength at lower cost by a shift in personnel, a shift in mission?

General WALKER. If properly resourced, I think we can do what you want.

Senator McCLURE. In a lot of respects the Guard and Reserve have been treated like Third World nations in terms of equipment. You know that and I know that and it is time to stop it.

I share fully the desire that when we ask you to do something, we give you the tools to do it with.

IDAHO AIR NATIONAL GUARD

The Air National Guard in Idaho, many of them are my friends. I have watched with a great deal of pleasure the contest between regular units and Guard units in the Air Guard.

The Air Guard stacks up well against the active units as a tribute to the men and women that man those units and maintain that equipment, often older equipment, harder to maintain, higher cost to maintain, but they do it very, very effectively with very well, highly trained units that are capable of any combat mission if they are called on to do it.

Yes, I agree with you, if we give you the resources. It seems to me that if the Pentagon is taking seriously the Rudman proposal, and I would suggest, whether you like it or not, you had better take it seriously, you had better take a look at what role the Reserves and Guards might play in the event the Rudman plan is adopted by the Congress.

I think there is a high likelihood that all or part of that will be endorsed by this committee and by the Congress. I will make one flat prediction. I may be just as wrong on that as I have been on others.

When we start making choices where we save money, they are all hard choices. I know that the President does not like to talk of reducing one dollar below the dollar amount that has been requested and I understand and support his position, but I also work up here, not down there. I know what is being said up here.

I think I have some idea of what is apt to happen. We had better be anticipating what will happen, not just wishing what will happen. I think you, Mr. Webb, and your associates might play a constructive role.

I won't ask you if you have already got some plans made because that would imply that will happen and I know you would not want to admit that. I do suggest if you don't have those working papers underway, at least draw something up as a contingency plan.

WRITINGS OF SECRETARY WEBB

Senator RUDMAN [presiding]. Thank you, Senator McClure.

Before yielding to my friend, Senator Proxmire, let me comment to Secetary Webb, I notice in your biography, which we find very useful to understand who are the people testifying from the table, in addition to writing an enormously good work about Vietnam called "Fields of Fire," you also have done a lot of other writing.

I notice your military writing has included topics on key manpower within the services. You have addressed those. I may use some of your writings, which I am knowledgeable of, to prove a point.

I always think that people should stand by what they write, except U.S. Senators.

SUPPORT PERSONNEL

The proposal I have made does not affect any of the Reserve forces or Guards. As a matter of fact, I envision if the proposal were adopted, to make some adjustments to those forces.

In addition to that, the proposal does not cover the 1.65 million people that are involved in what I call combat forces. It was greatly distorted by those who wished to distort it.

I point out when I talk about support people, I do not mean people on the carriers that don't carry a combat MOS, or people in the Army divisions who do not carry a combat MOS. It does not touch them.

The 10 percent, whether that figure is right or wrong, is applied against the remaining structure of 700-odd thousand people who are truly indirect and auxiliary support. We are talking about things like Air Force Systems Command, which has close to 57,000 or 58,000 people; Defense Logistics Agency; the Army Materiel Command; Navy Material Command; and so many others.

The intellectual question that is simply asked here is: Can you reduce that kind of overhead by some significant amount, thus preventing the inevitable from happening here which is in the alternative making major cuts in procurement, major stretchouts in procurement and cuts in readiness which would affect then the Guard and Reserve forces as well.

That is the theory of this. I would point out that there are very few corporate models which do not move the point.

Eight years ago the incoming President of General Electric said we would cut 10 pecent of administration overhead. They said it wouldn't work. They did. Iacocca did the same thing at Chrysler. Eastern Airlines was announcing a very interesting productivity case in Miami where they took 110 people out of the machine shop and left 30 and increased productivity.

I submit to the services, and I think Mr. Webb will have to agree, that you can find a significant number of slots presently being filled by support people that could be reduced so as not to hurt the end force.

I am going to review your writings, Secretary Webb. Maybe I will be able to communicate with Secretary Weinberger about what his own people have said about manpower.

Senator Proxmire.

Senator PROXMIRE. It is an old saying in politics I wish my opponent had written a book.

Mr. WEBB. "The moving finger writes; and having writ, moves on."

Senator PROXMIRE. "Not all your piety or wit shall lure it back to cancel half a line."

Mr. WEBB. If I may, sir, I have no problems with standing by anything I have written in this area. I think it would be foolish for anyone to say that you can't utilize management tools and improve what you are doing.

If I were doing this sort of management, I would try to readjust our force structure rather than cut those people out of the service. This would improve our combat ability. We are very low in force structure as compared to the commitments we have around the world. That is my greatest concern.

Senator **Rudman**. I share that concern.

Senator **Proxmire**. I join those who congratulate you on your remarkable record as a writer and gallant soldier, as you have been and knowledgeable on the basis of firsthand experience in combat.

It is no accident, Mr. Webb, that both Senators from Wisconsin have been here today. We are very proud of our Reserve and National Guard. We think it is doing a marvelous job and we are very hopeful they can get the kind of equipment they need and they feel they should have. We have been instrumental in helping them a bit in getting equipment.

C-130 RESERVE AIRCRAFT CRASH IN HONDURAS

As you know, we had a tragic air crash involving a Wisconsin C-130 Reserve aircraft going out of Milwaukee, which crashed in Honduras with the loss of all onboard.

Do you have an indication of what caused that crash?

Mr. **Webb**. I do not personally, sir.

General **Gill**. That was one of my aircraft out of the 440th in Milwaukee. The accident was briefed to the MAC Commander, CINCMAC last week. I have not seen the final briefing on the crash.

I can say that at this time it does not look like the age of the aircraft had anything to do with the accident.

Senator **Proxmire**. That is the question I was going to ask you, whether or not the age of the aircraft which was the oldest C-130A model had anything to do with that?

General **Gill**. The accident report which I have seen which is not the full accident report does not indicate the age of the aircraft contributed to the accident.

Senator **Proxmire**. When do you think that this Milwaukee unit and other reserve units with similar aircraft will receive more modern aircraft?

General **Gill**. Right now the master plan calls for us to get rid of those 48 that I mentioned before. I have 48 C-130A's. I have the No. 1 130A that was ever delivered and the No. 2. That No. 1 130A is at Chicago O'Hare.

Those two aircraft are 30 years old this year. If you look at the MAC master plan, I don't get to start to replace those aircraft until 1993. Those aircraft will be 37 years old.

Senator **Proxmire**. I hope we can help you on that because it is a great matter of concern.

I hope you can give us for the record the fullest explanation you can in the next few days on the cause of that crash. The people in Wisconsin are deeply concerned.

General **Gill**. Yes, they are.

F-20 AIRCRAFT PURCHASE

Senator **Proxmire**. Mr. Webb, if the Congress were to find enough savings in the Department of Defense request and use these funds to buy F-20 aircraft for the Air National Guard, would you object to that?

Mr. Webb. Personally, I have to say that we have been given, with the elevation of this office, the opportunity to participate fully in the budget process as it relates to all of the Department of Defense. We believe that the budget as it has been set forth addresses the appropriate areas.

If there were funds available that did not impact on any of these other critical areas and if an F-20 buy were added above the F-16's that were on line to be procured, I would have no objection.

Senator Proxmire. Are you familiar with the statistics on Wisconsin Air National Guard indicating A-10 aircraft can be flown in such a way as to not require the A-10 engine improvement program?

Mr. Webb. We are, yes, sir.

We congratulate you on the innovation by the Wisconsin Guard.

Senator Proxmire. Could we use the money for that program to buy F-20's?

Mr. Webb. I would defer to General Conaway.

General Conaway. We discussed that briefly earlier. I think General Hoff, the wing commander of the Madison unit, has done a superb job.

PILOT'S ANTI-G SUIT

Senator Proxmire. He did. In most cases I give the Golden Fleece Award. In his case I give him an award of merit. What he did was to find a way of designing the protective cover that the pilot wears so that he wouldn't black out, wouldn't be in any danger.

He did it by spending his own money with a local manufacturer. He came up with a solution that they were able to accomplish in a matter of a short time. He was told before it would never be approved in Washington, it would take too long and cost too much. He did it on his own initiative.

General Conaway. Yes, sir, that deals with the anti-G suit. General Walker mentioned that and the whole Air Force has adopted that. It is an excellent innovation. He has also been singled out for an award by the Air Force and the National Guard as well.

In addition to that one, he has an initiative for a management program for the A-10 engines that do need modification. He is extending the life on the A-10's and most of the Air Force has adopted this program until we can catch up with the modifications.

I think the modifications are still needed on the A-10. I am not sure to what extent this modern management program has been implemented. We have to dig into that a little deeper.

WOMEN IN GUARD AND RESERVES

Senator Proxmire. Mr. Webb, what have you done to improve the career positions of women in the Guard and Reserve? Can you give me current statistics, number and percent of women in the Guard and Reserves?

Mr. Webb. Yes, sir. I can give you the detail now.

The percentage of women in the Guard almost directly mirrors the percentages on active duty.

The Marines Corps Reserve which is almost all combat-oriented has the lowest percentages, 4 percent.

The Army Guard is the same way, low percentage, because it has 50 percent of the combat power of the Army.

Air Force Reserve and Army Reserve, about 16 to 17 percent. They have a lot more support missions and noncombat functions.

Our policy has been to mirror the overall DOD policy with respect to women. There is no separate policy in the Guard and Reserve.

Senator PROXMIRE. So, you have increased it about the same rate as the regulars?

Mr. WEBB. Increased it a little bit more, but generally it is about the same rate.

I have on my staff the first female line officer assigned to the State headquarters of the Pennsylvania Air National Guard and also a Navy commander, the first female officer to command a large Navy and Marine Corps reserve center.

Senator PROXMIRE. Here is one Senator who wants to encourage you any way I can. I think it will add greatly to our military forces. Obviously, nobody likes to change, none of us do, even Democrats. We have found that, as you know better than I do, that women have done a great job in the military.

It is no longer a matter of carrying a big pack and marching 30 miles and digging foxholes. It is a matter of skill and intelligence. There is no difference between the sexes on that.

Mr. WEBB. If I may, sir, I understand the motivation behind much of this sort of question wherever I appear.

First of all, my overall positions have not changed, my feelings have not changed. I think they were misunderstood at the time I was up for confirmation.

I have always supported the idea of women in the military. My wife served 5 years on active duty.

Senator PROXMIRE. Your wife is a——

Mr. WEBB. My wife was a nurse who served in Vietnam and in Germany; after that served 4 years in the Selected Reserve as a public health officer attached to the 82d Airborne. She is currently in the IRR.

The hesitation that I have had is in what you might call the labor intensive units, combat units, where the unit cohesion and physical abilities are most important indicators of success.

Senator PROXMIRE. It takes a long time. Maybe you have some meritorious reasons for resisting the change.

Everything I have seen and observed indicates that women can do everything a man can do. Some women can't cut it; some men can't.

General BERKMAN. In the Army Reserve in the past 5 years the female personnel have increased 80 percent. We are projecting in the Selective Reserve for fiscal year 1986 approximately 19 percent of our force will be female.

Senator PROXMIRE. Thank you, sir. That is very, very helpful.

I proposed legislation to increase the amount of optional life insurance that all members of the Armed Forces can buy from $35,000 to $50,000. It would not have any effect on the budget. Of course, it is paid for by the people who buy it.

Do you support that legislation?

Mr. **Webb**. Yes, we do.

RECRUITMENT GOALS FOR GUARD AND RESERVE

Senator **Proxmire**. Are you finding it difficult to meet recruitment goals for the Guard and Reserve in any of the the three Services?

Mr. **Webb**. I will let anyone have a whack at that who wishes to.

As of the end of the first quarter, this year, we are almost exactly where we wanted to be as far as program strength, and, in fact, over in some components. We believe this total package of incentives is one of the great reasons why we are.

RETENTION IN GUARD AND RESERVE

Senator **Proxmire**. Are there any significant changes in the retention in Guard and Reserve?

Mr. **Webb**. I would say, first of all, retention is a word that has been used in the large and perhaps carelessly. There are two elements that go into retention.

One is attrition, people who fall out before they complete their enlistment, and the other, which is retention as it has been traditionally used, are the people who reenlist after they reach that point.

The reason I break that down, the first area which is attrition, is a very serious problem, particularly in ground units. It has improved. We have developed a system since this office has been elevated where we can actually track cohort groups.

We believe with the incentive programs and with the higher quality of individuals, we see a measurable reduction in attrition which will help, because more people will reach the point where they can reenlist and eventually enjoy the fruits of enlistment.

Also we track cohorts who use the bonus programs and the other incentive programs. We find that although the enlistment figures have not gone up, those people tend to affiliate longer.

So, there is measurable statistics that show those programs support it.

Senator **Proxmire**. One other question and then I have questions for the record.

BUDGET OPTION ON TRANSFER OF AIRCRAFT CARRIERS

The CBO has provided Congress with a budget option involving transfer of three aircraft carriers and supporting vessels to the reservists with savings of a billion dollars.

Do you support this budget option and do you agree with the statement of savings?

Mr. **Webb**. I will say something generally and then defer to Admiral Kempf.

In 1968 the U.S. Navy had 931 ships in the active fleet. Today we have 560 accomplishing essentially the same missions. We have the whole ocean commitment.

Unless the Congress is willing to change the structure of the American commitments abroad, I do not see how you can cut back on the active Navy.

NAVY COMMITMENT THINLY DRAWN

Admiral **Kempf**. I would like to submit an answer for the record because I want to be sure we give the right answer.

I can tell you, as Mr. Webb said, we are very thinly drawn in meeting our deployed commitments. The one thing about the Naval Reserve, and I believe all the Reserve and Guard forces, is our inability to take on peacetime deployments.

When you speak of whole carrier battle groups, we get into the real muscle of the Navy. So, I would be very cautious from the standpoint of capability and what our commitments are.

Quickly on the other side you touched on the questions you asked about——

Senator **Proxmire**. Before you get away from that, would it be possible, if it is not three aircraft carriers, one aircraft carrier?

Admiral **Kempf**. We have always said for some time that 15 deployable carrier battle groups are what we need to meet our commitments.

As I say, I would prefer to provide an answer for the record.

[The information follows:]

Carrier Battle Groups

A 600-ship Navy based on 15 active carrier battle groups [CVBG's] is a minimum-force level necessary to meet our peacetime commitments, maintain a strong deterrent posture and, if necessary, carry out our warfighting tasks with prudent risk. Because of the emergence of a global, blue-water Soviet maritime threat, the number of carrier battle groups necessary to avoid turning any of our vital maritime areas over to Soviet control is calculated on a number of factors: the advantages of geography that exists, the substantial contributions that U.S. Air Force and allied Navy and Marine forces can add, and the strike capability that only U.S. battle groups can provide.

The 15 CVBG's required to fulfill our commitments must all be active and fully deployable in peacetime. This will allow us to maintain proper carrier materiel quality by having one CV in the Service Life Extension Program [SLEP] and 2 CV's in overhaul at any one time. This 15 CVBG force supports a turnaround cycle of 2.0 for peacetime deployments (12 months operating out of homeport for every 6 months forward deployed).

The 12 active CV/three inactive reserve CV force level proposed by the Congressional Budget Office would leave critical holes. At least 15 active, ready CVBG's are necessary to meet minimum level of capability required to support strategic force employment necessary early in global conflict. This minimum force level has been derived from the recommendations of the fleet commanders-in-chief, campaign analyses, war gaming, and studies. The minimum force level of 15 carrier battle groups is viable within the constraints of "prudent risk" and affordability. Assigning even one aircraft carrier to the Reserve component would prevent us from having these 15 carrier battle groups available when needed. The threat is real. The Navy must have the capability to counter the threat.

RECRUITING GOALS

Admiral **Kempf**. Back to the business of whether or not we are meeting our recruiting goals, I would like to tell you it is getting more difficult. Whatever has happened in the last few months. the recruiting, particularly new contracts, is becoming more difficult.

I think we will make it, but I believe we will only make it if we maintain the incentives we have and they are not all just money.

We need to look at this CBO proposal very, very carefully. To take on the recruiting for any carrier battle groups in the Reserve would be something we ought to consider only after we see how we are doing in manning the ships already planned for the Naval Reserve.

My plate today is very full. The Task Force Report that we recently submitted does have some additional initiatives for taking on new missions. If we accomplish these initiatives, I think we will have done a good job.

I would be cautious about taking on great groups of particular ships, as, total Reserve missions.

Senator PROXMIRE. Thank you.

Mr. Webb, you said that perhaps the people in the Army and Air Force still might comment on recruiting goals.

General WALKER. The Army and Air Guard last year achieved their strength goals, 434,000 for the Army Guard, 105,000 for the Air Guard, and are moving to 438,000 this year for the Army Guard and 107,800 for the Air Guard.

We will have no problems reaching those goals, but I do anticipate that in the out-years when we program for 500,000 in the Army Guard and 121,000 in the Air Guard in 1990, yes, we face challenges with that.

Last year you helped us when you gave us the GI bill. There are those who think the GI bill cures all of our recruiting problems. It won't, because it only provides the incentive for the young man and woman who want to go to college, but there are many who do not wish to go to college.

We have to have some incentive to bring those people into our force. That is the reason I said earlier, sir, before you got here, that I would certainly hope this committee would reenact the Selective Reserve Incentive Program which expires on the 30th of September this year.

I would hope that you would look at the bonus amounts that program now provides. That was passed in 1979. I think they need to be adjusted upward.

Sir, with that kind of help, I think we can achieve our programmed strength goals.

Senator PROXMIRE. You are speaking of both the Army and Air Guard?

General WALKER. That is right.

General BERKMAN. With respect to the Army Reserve, we are extending our recruiting goals. We recognize that demographic projections indicate a decline in the number of young people who will be available, so that the kind of incentives that General Walker spoke about, the Selective Reserve Incentive Program as well as the education assistance, GI bill, those kinds of support are very important.

In addition, we are putting additional full-time recruiters into the market in order to achieve those results. It is important that we continue to have the same kind of success that we had in the past year or so and that is bringing in a high percentage of enlistees who are high school diploma graduates.

High school diploma graduates tend to have better retention, less attrition than the high school diploma graduate's counterpart. That is an important part of the manpower equation.

In summary, that kind of support with the incentive program, educational assistance program support, and additional full-time personnel in recruiting, all of these things are important and with that we are optimistic.

Senator **Proxmire**. Thank you very much.

Mr. Chairman, I have some other questions for the record.

Senator **Rudman**. They will be submitted.

CAPPING OF ACTIVE END STRENGTH

I suppose in terms of the last question Senator Proxmire asked if we did in fact cap the active end strength this year, which is a real possibility, that, of course, is about to change the recruiting situation out there in the field, I suppose.

If you cap that, you are apt to get more people in the Reserve and Guard, are you not?

General **Berkman**. With one possible caveat and that is, with great respect, we are talking about different markets. The individual that is attracted to a full-time career in the active component may not be the individual on a part-time basis who is interested in pursuing the Reserve.

Senator **Rudman**. I understand that. You take the young people, there is now a limitation on recruitment in some way if the attrition does not offset that. Of course, you have people who want to be in the military, a lot of young people today do.

SUBMITTED QUESTIONS

Mr. Secretary and gentlemen, thank you very much.

The committee has a number of questions which we will submit for your response. They will be inserted in the record at this point.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

ADDITIONAL COMMITTEE QUESTIONS

RESERVE AFFAIRS OFFICE

QUESTION: Mr. Secretary, the Congress approved creation of an assistant secretary position for reserve affairs in FY 1984. As the first occupant perhaps you can tell the Committee what role you have in shaping our reserve forces which differs from that of your predecessor, the Deputy Assistant Secretary for Reserve Affairs?

ANSWER: Basically the difference in role involves access, not only for the Assistant Secretary (Reserve Affairs) but for his staff, and adequate professional staff capability. The Assistant Secretary has regular meetings with the Secretary of Defense and the Deputy Secretary of Defense. He is in a position to discuss with other top Defense executives, matters in their area of responsibility which impact on the reserve components. He is a member of the Defense Resources Board and other major DoD groups. His deputies and key subordinates are members of management groups and task forces. At the previous Deputy Assistant level, access was much more circumscribed.

A relatively modest staff increase has made it possible to establish executive responsibility and professional staff coverage for Manpower and Personnel under Deputy Assistant Secretary Stuart H. Sherman, MG, USAF; Material and Facilities under Deputy Assistant Secretary Billy M. Jones; Readiness and Training under Deputy Assistant Secretary Gerald H. Turley. There are also directors reporting directly to the Assistant Secretary for certain across-the-board functions including planning, programming and budget, mobilization policy and plans, analysis, and policy and program liaison.

As a result of these changes the Office of the Assistant Secetary of Defense (Reserve Affairs) has full membership in the DoD management team.

RESERVE AFFAIRS OFFICE

QUESTION: What staffing increases and budget requirements were added with the creation of this office?

ANSWER: Current staffing authorization reflects an increase of 45 civilian and military personnel as a result of the change from a DASD to an ASD status. The supporting operating budget requirement has increased by $1.3 million as a result of this change. This increase does not include pay and allowances for assigned military personnel, as that support is budgeted by the appropriate Military Service.

RESERVE MISSIONS

QUESTION: In your opinion are there other missions currently performed by the active component which would be more suited for the reserves?

ANSWER: Given the current force structure and the demand for forward deployed forces, problems could be encountered in shifting any more missions from the active to the reserve components. This is particularly true in the sea services because of their high peacetime operating tempo. Over the long term, it might be possible to place more missions in the air reserve forces without affecting the deployment ability of the active forces. Also over the long term, with proper adjustments in NATO, it might be possible to shift some missions in our ground combat units.

ARMY GUARD AND RESERVE SUPPORT OF MODERNIZATION

QUESTION: The Army Reserve provides 70% of the Army's non-divisional maintenance units, but are not organized, equipped or trained to support the M-1 or Bradley Fighting Vehicle. What is being done to correct this deficiency?

ANSWER: The Army is in the midst of the most ambitious peacetime modernization effort ever conducted. Fiscal constraints prevent the simultaneous conversion of every active and reserve unit. The modernization and conversion effort is made even more difficult when the relationship of supporting to supported units comes into play. Fielding plans for new items of equipment are time phased and take into consideration the requirements of the supporting forces.

As equipment becomes available through procurement, unit authorization documents are revised and new equipment training programs are conducted to ensure that the Reserve combat support and combat service support units are ready to maintain the newer generations of equipment. In addition, the Army has conducted a special effort to identify those items of equipment that prevent Guard and Reserve units from conducting meaningful training. Off line efforts to secure and distribute the required equipment are being pursued.

QUESTION: What is the funding shortage, and why weren't these requirements budgeted when the hardware was procured?

ANSWER: The Army program currently includes $54 million for high priority equipment funding requirements in support of the Department of Army Management Action Plan (Reserve Component Transition to Modernization) which provides the roadmap for solving this problem. Equipment will be distributed among 38 units and employed under a regional training concept supporting all non-divisional maintenance units. Due to fiscal constraints, when all required projects cannot be funded, priorities must be established. Although needed, equipage of all units cannot be supported at this time due to other high priority requirements. The Army is considering additional funding in this area in its FY 87-91 POM deliberations.

PEACETIME TRAINING EQUIPMENT

QUESTION: Mr. Secretary, the annual equipment report lists three unfunded requirements for essential training equipment: support for 220 Army reserve units, Naval Security Group Training systems, and a shortage of combat communications for the Air Force Reserve. What will it cost to fully equip our reserves for peacetime training?

ANSWER: The National Guard and Reserve Equipment Report identified numerous specific items which are deficient for training. The cost to fill these requirements is $119.5 million. Of these listed requirements, all but approximately $68.5 million is programmed for fill by the end of fiscal year 1988. In addition to these specific items, the equipment report also identified numerous items of required operational equipment which must be available, in part, to support meaningful training. As the identification of these assets is a new endeavor, the Services have not yet accurately identified all items of wartime operational equipment which are also essential to peacetime training, or what percentage of these items are necessary for training purposes. The Army alone has over 10,000 line items of major equipment to review. This problem, however, is being addressed. As information becomes available as a result of these efforts, the current data on training equipment shortfalls will be updated. Time and effort is being dedicated to establish a sound management base for this program to ensure the validity of stated requirements.

PEACETIME TRAINING EQUIPMENT

QUESTION: Would you agree that peacetime training equipment funding should be your first priority?

ANSWER: Within the reserve forces it is essential that all units have sufficient equipment with which to train. Further, all early deploying Guard and Reserve units must have on hand or readily available in the event of mobilization, sufficient equipment to carry out their wartime mission. Later deploying units can be equipped to wartime requirements depending upon equipment availability.

SELECTED RESERVE END STRENGTH

QUESTION: Mr. Secretary, the FY 1984 end strength in the Selected Reserve surpassed the previous peacetime high by more than 39,000 people, yet you are increasing your strength by 32,000 in FY 1985 and are requesting an additional 47,000 in FY 1986. How can you justify another large increase given your current total strength?

ANSWER: The current Selected Reserve strength program is based on a different threat and national security plan than the one in 1959 when we achieved the previous high strength level. We now have a Total Force of active and reserve forces that was initiated in the 1970's. Under this Total Force, there has been a significant increase in the capability, readiness and reliance on the Reserve Forces. The current strength program is essential to meet this increased reliance.

QUESTION: Will these dramatic increases taper off in the outyears?

ANSWER: As reflected in the Defense Manpower Requirements Report to Congress for FY 1986, the current programmed increases will slow to 29,600 (FY 88-89) and 14,800 (FY 89-90).

O&M COSTS TO SUPPORT MILITARY END STRENGTH INCREASES

QUESTION: How much does the increase in military end strength drive up your O&M support costs?

ANSWER: The O&M costs to support strength increases are as follows:

	Strength Increases	O&M Costs ($000)
Army National Guard		
Paid Drill	2,017	$ 1,513
AGR	10,096	10,601
Total	12,113	$12,114
Army Reserve		
Paid Drill Strength:	9,440	
CTA Clothing and Equipment		$10,877
Recruiting and Advertising		$10,759
Active Guard/Reserve (AGR):	4,014	
TDY Travel and Per Diem, Supplies and Equipment		$ 8,389
Total	13,454	$30,025
Air National Guard		
Drill	2,369	$ 1,059
Full-Time	800	1,491
Total Military	3,169	$ 2,550

Air Force Reserve

O&M costs in the AFR budget request cannot be related to a single factor such as military end strength increase. The O&M budget is built on mission requirements such as type of aircraft flown and maintained, flying hours required, deployments programmed and supplies and equipment needed to accomplish the mission. There is no single O&M support factor that is used to determine these costs that can be related to an individual reservist. All O&M costs are mission related not strength related.

Navy Reserve

O&MNR costs directly associated with increases in military end strength include training costs, incremental support and administrative costs. These annual costs in FY 1986 average $700 per person for full-time personnel (TARs and TEMACs) and $100 per person for Selected Reserve personnel, or $3.9 million.

Marine Corps Reserve

The Operation and Maintenance, Marine Corps Reserve (O&MMMCR) budget includes the costs of individual and organizational equipment and supplies associated with increases in Selected Marine Corps Reserve (SMCR) end strength. Ordinarily, the request for a given year will include an increase for support of increased end strength and a decrease reflecting a reduction for the strength increase from the previous year, since most of the costs for this support are for initial outfitting and only replenishment and replacement costs occur after the first year.

The end strength support costs in the FY 1986 O&MMCR President's Budget are somewhat different, since the actual FY 1984 end strength and the estimated strengths for FY 1985 and FY 1986 have been lowered from the figures presented in the FY 1985 President's Budget. This budget included funding to support an FY 1984 end strength of 43,884. The actual FY 1984 end strength was 40,619. Since the equipment and supplies were bought in anticipation of the budgeted FY 1984 end strength, which is higher than the currently projected FY 1985 and FY 1986 end strengths, the FY 1985 Current

Estimate and the FY 1986 Request do not contain funding for initial outfitting of increased end strengths in FY 1985 and FY 1986. The FY 1985 Current Estimate does contain a program decrease of $1,984,000 to adjust for the lowered FY 1985 end strength estimates from the FY 1985 President's Budget.

FULL-TIME SUPPORT/ACTIVE GUARD AND RESERVISTS

QUESTION: Included in your budget is a request for 19,600 additional active duty Reservists and Guardsmen--a 35% increase from last year. This will cost $440 million for pay alone. In light of the substantial growth in this program in the past few years and its high costs, why are additional full-time military personnel requested?

ANSWER: Of the $440 million indicated as cost of the full-time strength growth, $386.5 million is attributable to the actual strength increase. The remaining $53.5 million is annualization and payraise costs for the prior year strength growth.

The fiscal year 1986 requested increase in reserve component full-time support personnel is primarily geared to force structure changes, equipage increases and changes, and to meet minimum manning levels associated with mobilization readiness criteria. For example, 4,300 of the requested increase is in support of the Naval Reserve to include the manning of existing FF-1052 and FFG-7 class frigates as well as additional ships to be transferred to the Reserve during FY 1986. Increased full-time support is also required at the supporting Shorebased Intermediate Maintenance Activities which provide not only essential maintenance support to the frigates, but also provide the shore structure for sea/shore personnel rotation. Additional full-time support is required for recruiting support and to support the transition to more technologically advanced aircraft, e.g. F/A-18, F-14, and A-7E. Almost 1,000 of the indicated increase is merely the transfer of the Naval Reserve recruiting effort from the active component personnel account to the reserve personnel account and is, therefore, not a strength growth for the Total Force. The growth of 346 for the Marine Corps Reserve provides similar support for additional aircraft being assigned to the reserve component, e.g. KC-130T at Stewart Field, N.Y., and transitions to other more complex aircraft, e.g. AH-1T and F-4S. The Air National Guard increase of 800 is also, for the most part, direct unit support. This includes maintenance support for new aircraft acquisitions and transitions, e.g. F-16, F-15, F-4E, C-141, and C-5 aircraft. The Army's requested increase of approximately 14,000 for its reserve components is primarily based on its priority effort to increase the level of full-time support in its deployable company size units to meet prescribed readiness criteria.

The full-time support requirements associated with the expansion of the reserve forces resulting from the assignment of more technologically advanced and complex equipment and the training requirements generated by an increasing drilling reserve population, makes the requested strength growth essential to the proper utilization of these assets.

CIVILIAN VS FULL-TIME MILITARY

QUESTION: I understand using civilian employees to perform functions planned for full-time military would be cheaper, but your request for civilians is up by only 670 people compared with 19,600 military. Why have you chosen the more expensive route?

ANSWER: The request for additional civilian employees reflects a net increase resulting from an increase of almost 1,200 military (civilian) technicians and a decrease of approximately 500 Departmental civilians. The need for the increased full-time support is generated by the requirement that such members be mobilizable with the unit they support and, thus, cannot be met by Departmental civilians. Accordingly, the Departmental civilian employee is not a part of the requested addition. Regarding the relative cost of full-time military versus military technicians, it is not agreed that the full-time military Active Guard and Reserve (AGR) members are the more expensive in all instances. Relative costs between these two manpower sources is a function of their grade structure in the various reserve components. In several cases, such as maintenance technicians in the Air National Guard, technician resources are more costly than AGR's. Notwithstanding, we remain committed to providing the most cost effective full-time resources consistent with readiness requirements.

The flexibility to determine the manpower resource which best meets the need is essential. For example, 4,300 of the requested full-time military increase is in support of the Naval Reserve (which does not utilize technicians) in areas such as Frigate ship manning, Ship Intermediate Maintenance support, aircraft transitions and force structure changes, and recruiting. Almost 1,000 of the Navy's indicated increase results from the transfer of Naval Reserve recruiting resources from the active force personnel account to the reserve personnel account and is, therefore, not a Total Force strength growth. The Army's requested full-time military increase of approximately 14,000 is primarily based on its action to increase the level of full-time support in its deployable company size units as a readiness and training enhancement measure. This increase is the first priority in the Army full-time support program and the AGR resource has been found to be the most effective in these units.

QUESTION: Isn't it correct the nearly 80% of your civilian employees are also drilling reservists "citizen soldiers"? In what way are full-time military a better readiness asset than these citizen soldiers.

ANSWER: Approximately 80 percent of the Department's total civilian employee strength as funded by the reserve component appropriations are military technicians. Ninety eight percent of the military technicians are drilling members of the unit they support. The remaining two percent are "status quo" technicians who have lost their military status and are no longer mobilization assets.

The principal advantage, from a readiness standpoint, of the AGR over the military technician is their around the clock availability. AGR's, by virtue of their full-time military status, are available seven days a week and are not subject to the same restrictions on overtime. Also, AGR's are in all cases immediate unit mobilization assets in contrast to technicians, some of whom will not mobilize with the unit they support since they are "status quo's," or are drilling reservists in other units.

RESERVE PERSONNEL INCENTIVES/PAY

QUESTION: Secretary Webb, the Selected Reserves achieved 99.5% of their programmed end strength in FY 1984 and you project 100% in FY 1985. Why should the Congress approve an increase in excess of $200 million for recruiting and retention incentives?

ANSWER: While we achieved 99.5% of our programmed end strength for FY 1984, this was a single year's achievement in a phased growth plan based on increasing requirements for the Reserve Components. Although we are projected to achieve the FY 1985 end strengths, shortages in specific critical skills in high priority National Guard and Reserve units will persist. The FY 1986 budget request includes $129.7 million for reserve recruiting and retention incentives, an increase of $16 million over the FY 1985 estimate. The new GI Bill for the Selected Reserve is budgeted for $94.5 million; however, we cannot judge its effect at this stage as we have no experience with it and it is an entitlement rather than a bonus targeted at critical skills and hard-to-man units. We estimate the Department's legislative proposal (DoD 99-79) to increase the bonus thresholds would cost approximately $32 million to implement bonuses at the higher levels for the most critical skills and units. The current successes of our program have been possible in large part because we have had the existing Selected Reserve incentives and recruiting resources. Extension of the current bonus authorities and the proposed authority to raise the ceilings will enable us to achieve our numerical and qualitative objectives.

DUPLICATE EDUCATIONAL INCENTIVE PROGRAMS

QUESTION: Mr. Secretary your statement supports a request for a five year extension of the education cash bonus program which expires this June. Won't the $94.5 million requested for the new GI Bill satisfy the educational incentive needs of the Guard and Reserve?

ANSWER: The $94.5 million will support reserve educational assistance payments under the new program that is scheduled to commence on July 1, 1985. The GI Bill will provide, as an entitlement, what was previously one part of the total package of targeted Selected Reserve incentives. Our request for a five-year extension of the cash bonus authorities is limited to the enlistment and reenlistment bonuses authorized in title 37 U.S.C. The new reserve GI Bill authorized in Chapter 106 of title 10 U.S.C., replaces the current program authorized by the same chapter.

QUESTION: Why do you need two programs to do the same thing?

ANSWER: We need only one educational assistance program. The new reserve GI Bill provides a base that will help support overall manning goals in the Guard and Reserve. Cash incentives are needed to give us the targeting capability to direct high quality recruits and reenlistments into critical skills and allow us to man reserve units located in difficult markets. Consequently, we are requesting a five year extension of the cash bonus programs.

RECRUITING AND ADVERTISING

QUESTION: Your request for recruiting and advertising has increased by 47% while your accession goals have only increased by 8%. Considering this difference and your recent recruiting successes why is such a large increase in recruiting and advertising funding necessary?

ANSWER: The FY 1986 accession goal is 13% higher than the number that enlisted in the reserve components in FY 1984. Total accessions in FY 1984 were 221,700 and are projected to be 251,200 in FY 1986. Real program growth in reserve component recruiting and advertising between FY 1984 and FY 1986 is 36%. The FY 1986 request is for $453.5 million which includes funds for enlistment incentives, military pay of recruiters, civilian pay, advertising costs, and recruiting support. Program growth is required to increase nonprior service enlisted accessions by 20%, offset the declining recruiting environment, and establish an adequate resource base for future increases in reserve component enlistment requirements.

F-20 AIRCRAFT FOR AIR GUARD

QUESTION: Is there a mission for the F-20 aircraft or performance improvement that cannot be met with the newer aircraft in the Air Guard inventory?

ANSWER: Currently programmed F-16 aircraft, provided with periodic update modifications, will meet needed performance improvement requirements. While there are no current plans for use of F-20 aircraft, that aircraft could be used in both the air defense and ground attack roles.

KC-135 TANKER AIRCRAFT

QUESTION: For the past four years the Congress has added funds to reengine Air Guard KC-135 tanker aircraft with used commercial 707 aircraft engines. Are the so-call "KC-135E" aircraft performing the refueling mission any better?

ANSWER: The KC-135E is performing up to, and even exceeding, our expectations. Our units located on civilian airfields are now better neighbors with these cleaner, quieter engines we now operate from US and NATO fields not previously available, and we can better fulfill the request of the receiver aircraft by having more fuel available where needed.

ARMY CONTINUING EDUCATION SYSTEM (ACES)

The Army National Guard budget includes $8.9 million to expand the Army Continuing Education System (ACES) to the Guard in conjunction with new educational requirements for Guard officers.

QUESTION: Why do you need to increase educational requirements for Guard officers?

ANSWER: As a reflection of the society it represents, the demand for higher educated officers within the Total Army has escalated sharply in recent years, and promises to continue to do so. A key factor here is the steady rise in the education level of enlisted soldiers. This trend presages expectations of higher educated officers as leaders. Also, the equipment, training, and mission scenarios of the Total Army are becoming more sophisticated, while the complexity of the military, socioeconomic, and political environments in which it serves is ever increasing. As an integral part of the Total Army, the officer corps of the Army National Guard must keep pace with these changes if it is to meet the challenges of the future.

QUESTION: Do the State Adjutant Generals support the new education requirements established by the active Army for the Guard.

ANSWER: Initially, many States objected or expressed reservations to the policy. However, as they have assessed the positive long term impact of the changes on their officer force, most of these same States have become strong supporters of the new policy.

QUESTION: What will happen to promotability of those officers who do not attend college?

ANSWER: Civilian education is only one of the factors involved in officer professional development. Essentially, officers fully qualified for promotion compete for selection. The best qualified officers with excellent performance records will be promoted.

ASSISTANCE FOR MILITARY PROFESSIONAL DEVELOPMENT

QUESTION: The Army Guard plans to implement the Assistance for Military Professional Development program in fiscal year 1986 for warrant officers. What are the costs of this program and is its implementation a result of increased educational requirements for warrant officers?

ANSWER: The Assistance for Military Professional Development program is a temporary program for commissioned officers which ends when the Army Continuing Education System starts in fiscal year 1986.

TRAVEL OVERSEAS

QUESTION: Secretary Webb, the Guard and Reserve forces are increasing their participation in overseas exercises thereby increasing their overseas travel costs. Are there new military requirements that necessitate more overseas travel by recent Reserve forces?

ANSWER: Reserve Forces participation in overseas deployment training has increased over the last several years. The increase is primarily due to assignments of wartime missions under the Army's CAPSTONE program but, more importantly, it is a recognition of the importance of this type of training in achieving and maintaining the required level of readiness. Participation in an overseas deployment and training exercise provides our personnel the opportunity to conduct operations for which they have trained and allows the total organization to be evaluated on its ability to execute its wartime mission. The training opportunities and experience encountered during these exercises can not be duplicated in a pure training environment at local or centralized training facilities and sites. Therefore, it is important to the total training program to participate periodically in an overseas deployment exercise. Every lesson learned in training improves the units probability of success in combat.

QUESTION: Considering the cost of overseas travel, wouldn't it be more cost effective to use the limited funds available to train in the U.S.?

ANSWER: Most of the training for the Reserve components can be, and is, done at local or centrally located training centers. There can be no substitute, however, for training accomplished during field exercises conducted at the probable site of wartime operations. Under the CAPSTONE program units have been assigned a wartime mission. A unit now knows the probable area of deployment in the event of mobilization. The training programs are tailored to this mission and when possible participate in exercises conducted in that area. The additional expense of providing this training is more than off-set by the savings incurred by maintaining a highly trained and capable Reserve instead of a correspondingly larger Active Force.

Exchange Officer Program

QUESTION: Mr. Secretary, you are creating an exchange program with the Federal Republic of Germany for reserve component officers. Could you describe the cost and the requirement for it?
ANSWER: The program will exchange reserve officers on a one for one basis for periods of two to four weeks, providing them with the opportunity to serve in their military specialty with the other nation. It also provides reserve officers of both nations with the opportunity to familiarize themselves with the structure, organization, equipment and operational doctrine of armed forces of the other nation. Such knowledge will be invaluable to the individual and the unit to which he is assigned should mobilization and deployment to the Federal Republic of Germany occur. Costs associated with the program include only the incremental increase in transportation costs of participants to and from Europe, compared with travel within the United States. Other costs should not be affected since exchange duty will satisfy annual active duty for training (ADT) requirements.

QUESTION: How many reserve officers will be included in FY 1986 and what are they expected to gain from the program?
ANSWER: Our office, in concert with the Services, is in the process of selecting a pool of qualified officers and simultaneously determining which professional areas will profit most from the exchange. The first exchange is intended to include 15 officers from each nation in a pilot program. Exchanges will commence this summer for a six month period thru the second quarter of FY 86. During this period the program will be evaluated and the specific size and professional make-up of follow on groups will be determined. Consequently, predicting the number of officers to be exchanged would be premature, at this time. The participants are expected to gain a greater understanding of the other country's military structure, organization and doctrine from this program, all of which would be particularly important in the event of mobilization.

LIGHT INFANTRY DIVISION

QUESTION: With the decision to station a Light Division in two places in Alaska, will the round-out brigade be assigned to one of the two or both locations?

ANSWER: The Reserve Component (RC) units selected to roundout the 6th Infantry Division (Light) will be existing organizations and will not be located in Alaska. The units will reconfigure to light design to match the Active Component portion of the division, but there is no intent to relocate the RC units. Upon Mobilization, and also during selected training exercises, elements of the RC Brigade will deploy and form with the Active Component units in preplanned locations.

LIGHT INFANTRY DIVISION

QUESTION: What logistical problems will arise if the round-out brigade is assigned to both locations?

ANSWER: The Reserve Component units selected will not relocate from their current station.

LIGHT INFANTRY DIVISION

QUESTION: What percent of the equipment needs of the round-out brigade will be met in FY 1986 and 1987?

ANSWER: The selection of the Reserve Component unit to roundout 6th Infantry Division (Light) will be based in part on the cost of converting that unit to light design. The exact equipment needs cannot be determined until the unit is selected; when selected, a program of distribution will be developed to equip the unit.

COMMISSARY TEST

QUESTION: The Department's test allowing Reservists an expanded commissary benefit was concluded in December 1984. When will the Congress receive your final report on this test? In the meantime, please provide your preliminary findings, together with their funding impact.

ANSWER: Preliminary results of the test were reported to the House Committee on Appropriations in Dr. Korb's letter of October 16, 1984. Since then, the test was completed and the Department's final report to the Congress prepared. That report has been reviewed by the Office of Management and Budget and we are currently staffing recommendations made by OMB. Sales data from the 22 commissaries that participated in the test indicated that commissary sales would increase by 3.3% if the tested concept was to be permanently adopted worldwide. This assumes that the use of commissaries by Reserve members remained at the test level; however, the test results on participation were significantly lower than we expected. Based upon the tested level of participation the Services would not require additional resources. We anticipate our final report to be submitted by mid May 1985.

RESERVE INCENTIVES, LEGISLATIVE CONTINGENCY

QUESTION: Provide a detailed dollar breakdown (including outyear costs through FY 1990), explanation, and justification for the following items included in the FY 1986 legislative contingencies account: $32 million, Reserve Incentives; $1.5 million, TAR bonus; and $.8 million, Selected Reserve Incentive.

ANSWER: The funding profile for the requested items is as follows:

	FY 86	FY 87-90
	($ Millions)	
Reserve Incentives (DoD 99-79)	32.0	210.2
TAR Bonus	1.5	6.0
Selected Reserve Unit Incentive Pay (DoD 99-62)	.8	3.2

The reserve incentive package requests an authorization extension for three existing incentives whose authorization expires at the end of FY 1985. In addition, an increase to the existing benefit levels and the authorization of one new initiative is requested.

(1) The enlistment bonus will be paid to non-prior service high school graduates who enlist for six years. The maximum authority would be increased from $2000 to $5000. Up to one-half of the bonus amount would be paid initially and the remainder would be paid in increments upon completion of each anniversary year. The FY 1986 cost included in the legislative contingency for the enhanced authority is $10.9 million.

(2) The reenlistment bonus is payable for a reenlistment or extension of three to six years in a designated unit or skill. A total bonus of up to $2,500 would be allowed for a three year obligation and up to $5,000 for six years. Payments would be made at the rate of one-half of the bonus amount upon reenlistment or extension with the remainder to be paid in annual installments. The FY 1986 cost for the enhanced authority included in the legislative contingency is $10.6 million.

(3) The affiliation bonus may be paid to active duty separatees with a remaining military service obligation (MSO), who affiliate with a reserve component unit in the same skill held on active duty. Our proposal would increase the amount payable from $25 to $75 at the end of each month of the remaining MSO. The FY 1986 cost included in the legislative contingency is $2.7 million.

(4) The new incentive, a prior service bonus, would be payable to an honorably discharged prior service member, with no remaining military service obligation, who enlists in a critical skill in a component for a period of three to six years. A total bonus of up to $2,500 would be allowed for a three year obligation and up to $5,000 for six years. Payment would be made at the rate of one-half of the bonus amount upon enlistment with the remainder in anniversary payments varying according to the total bonus awarded. The FY 1986 cost included in the legislative contingency is $7.8 million.

The reserve component enlistment and reenlistment bonus levels have remained essentially unchanged for more than 6 years. While these incentives have had a significant impact on the accession and retention quality members in priority units and critical skills, recent trends indicate that the current benefit levels need to be adjusted to remain effective. Attrition from the active force is declining due to a relatively constant sizing of the active force and higher retention rates within that force. This, coupled with the declining population of 18-24 year olds, results in new challenges and increased demands for reserve component retention and recruiting. The incentive package is integral to this effort.

For 1986 there is $1.5 million in the legislative contingency to provide an affiliation and retention incentive for the Navy's Training and Administration of the Reserve (TAR) program. This proposal is currently under review within the Department. As the Naval Reserve becomes more operationally intensive, increased demands are placed on the full-time support cadre. As a means of competing for quality personnel, this incentive would allow the payment of a selective reenlistment bonus (SRB) to members of the Navy's TAR program. These full-time active duty personnel are not presently eligible for the SRB, since existing law only allows the payment of a SRB to regular enlisted members of the active forces. The TAR SRB will be paid only to personnel with designated skills that have a high turnover rate, primarily in the seagoing ratings.

The Selected Reserve Unit Incentive Pay initiative is designed to effect improved manning participation and retention within those units of the Naval Reserve Force (NRF) that are required to perform lengthy inactive duty for training periods at sea. Members of a NRF unit are often required to perform up to 48 continuous hours onboard ship, during a drill weekend, in order to accomplish the necessary underway training. However, compensation is currently limited to payment of no more than five drills during this period. By comparison, shorebased weekend duty normally entails 16 hours of participation with compensation for four drills. The incentive pay would provide $10 per drill for each drill performed with a miximum payment of $50 per drill weekend.

We believe that the incentive package for the reserve components included in the legislative contingency will provide the proper balance of incentives necessary to attract and retain quality prior and non-prior service personnel.

O&M COSTS

QUESTION: For FY 1984 through FY 1986, provide the amount of O&M support the Guard and Reserve Forces receive from the Active components O&M budget.

ANSWER: Army Reserve and Army National Guard units performing their annual training on active installations receive some base operations support from the Active Army O&M appropriation. In addition, institutional training and training materials are also budgeted in the active O&M appropriation, however, the O&M accounting system does not distinguish between Active and Reserve Component uses, therefore actual dollar amounts are not available.

Air Force Reserve unit operations are budgeted and paid from Air Force Reserve appropriations. In cases where support activities are significant, a host-tenant support agreement is negotiated and each component pays as agreed amount.

For the Air National Guard, the following O&M Support is received from the active Air Force O&M appropriation:

($000's)

FY 1984	FY 1985	FY 1986
776.5	14.0	14.0

Note: In FY 1984 there was support for chemical warfare equipment not included in FY 1985 or FY 1986.

O&M support costs for the Naval Reserve are not specifically tracked nor are they readily identifiable as accountable line items. There are areas of common service and joint use such as medical support that tend to serve the military population as a whole. When resources and programs within O&M are specifically identified to the Naval Reserve, the effort is made to migrate the funds and responsibility to O&MNR. Such was the case with the Naval Reserve recruiting and advertising mission shift from O&MN to O&MNR in FY 1985.

While the Operation and Maintenance, Marine Corps (O&MMC) appropriation does provide limited indirect support to the Marine Corps Reserve, such support is not separately identifiable. The nature of such support is usually combined with common or joint support for both Active and Reserve components as part of the Total Force concept and therefore considered to be appropriately funded by the O&MMC appropriation. Support to the Reserve is reviewed and when functions can be separately identified as supporting the Reserve, realignments are made between the O&MMC and O&MMCR appropriations.

Generally the Guard and Reserve pay their O&M costs from their own appropriations. We believe that support provided from active O&M accounts is primarily for minor base operations services which do not justify separate cost accounting.

O&M COSTS OF FIELDING NEW EQUIPMENT

QUESTION: Provide the O&M costs associated with fielding new equipment in FY 1985 and FY 1986 by Reserve Component and equipment type.

ANSWER: The O&M costs associated with fielding new equipment are as follows:

	Equipment FY 85	($000s) FY 86
Army National Guard		
M1 Tank	6,062	2,723
M60A3 Tank	606	2,304
Bradley Fighting Vehicle	264	4,929
M113 Armored Personnel Carrier	*	
Heavy Expanded Mobility Tactical Truck (HEMTT)	781	
Fire Support Team Vehicle (FISTV)	251	
Improved TOW Vehicle (ITV)	*	*
High Mobility Multipurpose Wheeled Vehicle (HMMWV)		1,392
CHAPARRAL		1,588
M198 Howitzer	835	1,670
FIREFINDER AN/TPQ36	400	742
Topographic Support System (TSS)	*	
Division Level Multichannel Radio AN/TRC 145	15	15
Multichannel Radio AN/TRC 151/152		
High Capacity Multichannel Radio AN/TRC 138	*	*
VINSON Voice Security Equipment	*	*
TACFIRE	*	*
AH1S Helicopter	599	3,722
UH60A Helicopter	180	3,565
CH47C Helicopter	*	

* Indicates year of equipment distribution and that fielding costs have been absorbed.

	$000 FY 85	$000 FY 86
Air National Guard		
C130H	$ 9,931	$ 12,549
F4E	12,188	25,898
C5A	3,470	-
F15A	-	18,217
F16A	-	4,255
C141B	-	2,548
	$ 25,589	$ 63,467
Army Reserve		
UH60A Blackhawk Aircraft and Flight Simulator	0	204
M-60A3 Conversion Equipment (Upgrade of M60A1 Tank)	80	162
10-Ton Heavy Equipment Mobility Tactical Truck (HEMTT)	0	8
High Mobility Multi-Purpose Wheeled Vehicle (HMMWV)	15	95
M939 5-ton Diesel Truck	1,037	886
Artillery BCS Equipment (Computer)	0	395
Decentralized Service Support System (DAS3)	534	1,024
TRC-173 and UGC-74 (Communications Equipment)	608	929
Division Level Data Entry Device	0	64
Commercial Utility and Cargo Vehicle (CUCV)	941	2,100
AN/TPQ-36 and AN/TPQ-37 (Firefinder Equipment)	0	20
Wheeled and Tracked Combat Vehicles	36	0
OPA-1 Equipment Semi Trailers M871 and M872 Scraper, SP 14CY Tractor, FT, T9 Loader 2.5 CY Grader, Heavy MOT	2,343	1,112
OPA-2 Equipment TD 1289 GRC (Ground Radio) DNTV TA 94/984 (Telephone Switchboard) EXJAM (Jamming Device) SFBCS (Burst Communications) AN/TRC 113 RRS (Radio Teletype) ANT GP OE254 (Antenna) SG 1139 (Communication Spt Equipment)	373	605
OPA-3 Equipment M51 NBC Shelter Topographical Survey Spt System Hoseline, Petroleum Chemical Alarm, M8A1 AN/VLQ4 Jammer Generator, 2000KW, 60HZ Outfit, Pneumatic T/C Compressor, 250 CFM	850	750

	$000 FY 85	$000 FY 86
Army Reserve (Continued)		
Displaced Systems	1,086	583
ITV M901 (Improved Tow Vehicle)		
Tow Carrier, M113		
AN/GLQ 3B (Radar System)		
Other Fielding Expenses	901	519
Renovation of Maintenance Facilities		
Change Maintenance Procedures		
Misc Maintenance Costs		
TOTAL	8,804	9,456

	$000 FY 85	$000 FY 86
Air Force Reserve		
C-5	$ 3,530	$25,967*
C-141	0	2,123**
F-16	7,652	0
C-130H	0	1,586

* A full year's operation of the new C-5 Strategic Airlift unit will not be realized until FY 86. Initial conversion will occur in the fourth quarter of FY 85.

** Initial C-141 equipped aircraft will be added to the Air Force Reserve inventory the fourth quarter of FY 86. A full year's cost of an 8 PAA unit will not occur until FY 88 as aircraft are gradually phased in during FY 87.

The ships and aircraft to be fielded in the Naval Reserve in FY 1985 and FY 1986 and associated O&MNR budgeted costs (where applicable) are displayed in the exhibits below. Additionally, the following major equipment will be fielded in the Naval Reserve in FY 1985 and FY 1986.

Equipment	FY 1985	FY 1986
Forklifts	0	69
Other MHE	0	53
Trucks	5	60
Tractors	0	11
Other CESE	0	54

O&MNR Support Costs for Aircraft
Joining the Naval Air Reserve Force
$(000)
FY 1985

TYPE ACFT	QTR				CIV PERS	TEST EQUIP	DEPOT MAINT REPAIR
	1ST	2ND	3RD	4TH			
P3B	4	3	1	0	2,120	141	1,280
A7E	0	0	0	4	1,300	0.0	7,052
F/A-18	0	0	0	0	0.0	0.0	0.0
SH-2F	2	3	5	2	405	900	1,801
F-14A	4	2	5	6	760	0.0	1,846
UH-60	0	0	1	0	0.0	102	0.0

FY 1986

TYPE ACFT	QTR 1ST	QTR 2ND	QTR 3RD	QTR 4TH	CIV PERS	TEST EQUIP	DEPOT MAINT REPAIR
P3B	2	10	1	0	2,816	089	2,040
A7E	3	3	6	5	1,900	142	10,970
F/A-18	3	6	3	3	500	0.0	1,010
SH-2F	0	6	2	0	450	0.0	2,041
F-14A	2	5	0	0	890	1,300	9,428
UH-60	1	0	0	0	180	0.0	220

Note 1: No increase in CIVPERS (GS Type). Figure represents OMNR $ for Contractor Engineering Technical Services.

SHIPS JOINING THE NAVAL RESERVE FORCE (NRF)

SHIP TYPE	QTY	1ST QTR	2ND QTR	3RD QTR	4TH QTR
		FY 1985			
FFG-7	2	0	0	1	1
		FY 1986			
FFG-7	4	0	1	1	2
ARS	3	0	0	0	3

O&MNR SUPPORT COSTS FOR SHIPS JOINING NRF
($000)

SHIP TYPE	FUEL	UTIL	REPAIR	OTHER OPTAR	IMA	EMERGENT REPAIR	SRA	CIVPERS
			FY 1985					
FFG-7	1200	507	2253	1033	241	130	300	0
			FY 1986					
FFG-7	1146	1087	2029	838	604	375	0	0
ARS	41	193	66	44	220	516	0	0

The O&M costs associated with fielding new equipment in FY 1985 and FY 1986 for the Marine Corps Reserve are as follows:

A. Logistics Vehicle System (LVS)

Civilian Personnel Support	0
Spare Part Costs	$113,163
Depot Maintenance/Repairs	0

No civilian personnel support costs are anticipated for LVS. Contractually, 240 man-days are available for field support from the contractor using PMC monies. Spare parts costs were calculated using a four percent (.04) inflation index for FY 86. No depot maintenance or repair costs shave been provided since no depot repair is scheduled for the first ten years of vehicle life.

B. High Mobility Multipurpose Wheeled Vehicle (HMMWV)

Civilian Personnel	0
Spare Parts Costs	$121,598
Depot Maintenance Costs	0

No civilian personnel support costs are anticipated for the HMMWV. Any field support required is contractually available from the manufacturer at no cost to the Government.

No depot maintenance or repair costs have been provided since no depot repair is scheduled for the first seven years of vehicle life.

C. Weapons, Other

Civilian Personnel	0
Spare Parts Costs	$ 80,000
Depot Maintenance Costs	0

No civilian personnel costs are anticipated for any of the weapons systems. The spare parts costs are based on $5,000 per M198 Howitzer. Depot Maintenance will not be scheduled for the first five years of use. The O&M costs for weapons other than the M198 Howitzer will mirror present budgeted support costs.

O&M COSTS TO SUPPORT MILITARY END STRENGTH INCREASES

QUESTION: Breakout the O&M costs to support the Guard and Reserve Military end strength increases in FY 1986 by Guard and Reserve Component and Active Components. Also provide the average cost used to figure the total O&M support necessary.

ANSWER: The O&M costs to support strength increases and the average costs used are as follows:

	Strength Increases	O&M Costs ($000)	Average Cost
Army National Guard			
Paid Drill	2,017	$ 1,513	$ 750
AGR	10,096	10,601	1,050
Total	12,113	$12,114	

Since the Active Army end strength does not increase in FY 86, there is no Operation and Maintenance, Army (OMA) increase due to an end strength increase. The average OMA cost of adding a non-prior service accession to the Active Army from the street to his/her first assignment after initial entry training is $10,993.

	Strength Increases	O&M Costs ($000)	Average Cost
Army Reserve			
Paid Drill Strength:	9,440		
CTA Clothing and Equipment		$10,877	$1,152
Recruiting and Advertising		$10,759	$1,140
Active Guard/Reserve (AGR):	4,014		
TDY Travel and Per Diem, Supplies and Equipment		$ 8,389	$2,100
Air National Guard			
Drill	2,369	$ 1,059	$ 447
Full-Time	800	1,491	1,864
Total Military	3,169	$ 2,550	

Air Force Reserve

O&M costs in the AFR budget request cannot be related to a single factor such as military end strength increase. The O&M budget is built on mission requirements such as type of aircraft flown and maintained, flying hours required, deployments programmed and supplies and equipment needed to accomplish the mission. There is no single O&M support factor that is used to determine these costs that can be related to an individual reservist. All O&M costs are mission related not strength related.

Navy Reserve

O&MNR costs directly associated with increases in military end strength include training costs, incremental support and administrative costs. These annual costs in FY 1986 average $700 per person for full-time personnel (TARs and TEMACs) and $100 per person for Selected Reserve personnel.

Marine Corps Reserve

The Operation and Maintenance, Marine Corps Reserve (O&MMCR) budget includes the costs of individual and organizational equipment and supplies associated with increases in Selected Marine Corps Reserve (SMCR) end strength. Ordinarily, the request for a given year will include an increase for support of increased end strength and a decrease reflecting a reduction for the strength increase from the previous year, since most of the costs for this support are for initial outfitting and only replenishment and replacement costs occur after the first year.

The end strength support costs in the FY 1986 O&MMCR President's Budget are somewhat different, since the actual FY 1984 end strength and the estimated strengths for FY 1985 and FY 1986 have been lowered from the figures presented in the FY 1985 President's Budget. This budget included funding to support an FY 1984 end strength of 43,884. The actual FY 1984 end strength was 40,619. Since the equipment and supplies were bought in anticipation of the budgeted FY 1984 end strength, which is higher than the currently projected FY 1985 and FY 1986 end strengths, the FY 1985 Current Estimate and the FY 1986 Request do not contain funding for initial outfitting of increased end strengths in FY 1985 and FY 1986. The FY 1985 Current Estimate does contain a program decrease of $1,984,000 to adjust for the lowered FY 1985 end strength estimates from the FY 1985 President's Budget.

FLYING HOUR INCREASE

QUESTION: The flying hour program increases from 1,223,000 hours in FY 1985 to 1,299,000 hours in FY 1986. (1) Provide an explanation of this increase. (2) Also identify the flying hour increase due to the military end strength increase by reserve component.

ANSWER: The Air Force Reserve portion of the FY 1985 to FY 1986 flying hour increase is a little more than 8900 hours and is primarily a result of an increase in authorized aircraft in the Reserve. For example, FY 1986 is the first year we programmed flying hours for our new C-141 equipped unit at Andrews AFB, MD, and for our KC-10 associate unit activating at Seymour-Johnson AFB, NC. FY 1986 also reflects our growing C-5 force as we continue to train our people at the new C-5 equipped unit at Kelly. We also require a small increase for the C-130 because the unit at Dobbins AFB, GA, will be getting two C-130Hs to reach its full complement of 8 aircraft. All of these conversations/activations require a corresponding increase in end strength to fly and maintain the equipage.

The Air National Guard flying hour program increased 10,779 hours and the military end strength 3,169 from FY 1985 to FY 1986. The increase is due primarily to conversions, primary aircraft authorization changes, and model/design/series changes, which also include crew ratio (CR) changes, i.e., conversion of a C-130H unit (2.0 CR) to C-141s (4.0 CR).

The US Army Reserve Flying Hour program will increase by 9,577 (from 90,476 hours in FY 1985 to 100,053 hours in FY 1986). Approximately two-thirds of these hours (6,145) will be used to increase the training program of Individual Ready Reserve (IRR) members to meet mobilization requirements. The Individual Ready Reserve Flying Hour Program will increase from 5,260 hours in FY 1985 to 11,405 hours in FY 1986. The majority of the remaining hours (3,432) will be utilized to meet the increase in mobilization training and mission requirements to support the Army of Excellence and support two Helicopter Ambulance Detachments that are being activated in FY 1985 and to prepare for the activation of two additional Combat Support Aviation Companies in FY 1987.

The Army National Guard aviator authorized strength increases from 5,242 in FY 1985 to 5,729 in FY 1986. The Army National Guard flying hour program does not increase from FY 1985 to FY 1986.

The Naval Reserve flight program increases of $13.3M and 12,402 hours from FY 1985 to FY 1986 are due to programmatic changes and completed aircraft (Squadron) transitions. Specific reasons for major program increases (more than 1000 hours) are:

A/C TYPE	INCREASE (HRS)	REASON
F/A-18	1326	Transition complete for Strike Fighter Squadron (VFA) 303; Establish Squadron Augumentation Unit (SAU) at Lemore
F-14A	1920*	Transition complete for two squadrons at Miramar; Dallas transitions start
SH-2F	2486	Transitions complete for the three Helicopter Anti-submarine Squadron Light (HSL) squadrons
SAU	2587	Continued growth in all areas (F-14, A-6, E-2, S-3, H-3) of the SAU
DC-9	4807+	Increase in number of aircraft; Transition complete at Atlanta, Willow Grove, Detroit

* Net of 1275 hr decrease in F-4 hrs

+ Net of 2160 hr decrease in C-118 hrs

There is not a direct relationship between military end strength increases and flying hour increases. FY 1986 Naval Reserve flight program increases are a result of modernization initiatives for Reserve Forces (F/A-18, F-14A & SH-2F), training requirements to qualify Reserve air crews in compatible fleet aircraft under the Squadron Augmentation Unit (SAU) Program concept, and logistic support requirements to satisfy an increasing fleet OPTEMPO.

RETIRED PAY ACCRUAL SUPPORT

QUESTION: Provide the dollar amount and civilian end strength increase budgeted for the retired pay accrual effort by reserve component. Also provide an explanation of this effort.

ANSWER: Funding and civilian end strength increases were not specifically budgeted for the retired pay accrual effort. Additional workload generated by this effort was accomodated from within existing staffs of the reserve components. However, additional funding and personnel (as indicated below) were requested for a related effort to improve the accuracy of the reserve personnel data base included in the Reserve Component Common Personnel Data Systems (RCCPDS). The additional requirements were an outgrowth of a Department of Defense Task Force which was formed to address the quality, accuracy and completeness of data on Reserve personnel, particularly with respect to years of military service, personnel transactions, records and retirement point accumulations. These data base improvements are needed to enhance the reserve component personnel data in support of force management and mobilization requirements and will also provide a reliable source of data from which stable reserve retirement accrual calculations can be made.

Additional Resources for Improvements to RCCPDS
($ in Thousands)

	FY1986
Army Reserve	
Other Procurement	$2,366
Operation and Maintenance, Army Reserve	500
Reserve Personnel, Army	785
Total Army Reserve	$3,651
Civilians	5
Navy Reserve	
Military Construction, Navy Reserve	$ 250
Operation and Maintenance, Navy Reserve	519
Operation and Maintenance, Navy	450
Total Navy Reserve	$1,219
Civilians	50
Marine Corps Reserve	
Procurement, Marine Corps	$5,000
Operation and Maintenance, Marine Corps Reserve	1,250
Total Marine Corps Reserve	$6,250
Civilians	16

STOCK FUND EQUIPMENT

QUESTION: Your equipment report indicates that major equipment shortages amount to $24 billion. What is the shortfall in equipment provided through the service stock funds? If the Congress were to add funds for Guard and Reserve equipment, what funding mix would you recommend between the Services for major procurement and stock fund purchases?

ANSWER: The $24 billion was a figure used for Fiscal Year 1983 by the Reserve Forces Policy Board and includes stock fund shortages as well as major equipment shortages. The reference for this information is the "Fiscal Year 1983 Readiness Assessment of the Reserve Components" by the Reserve Forces Policy Board, dated June 1984. This report is not related to the Annual Report to Congress on Guard and Reserve Equipment submitted by the Office of the Assistant Secretary of Defense for Reserve Affairs. Although a Reserve Component equipment shortfall does exist, there is some reservation concerning the accuracy of the Reserve Component $24 billion shortfall stated in the Reserve Forces Policy Board Report. Efforts are underway to review and refine that assesment.

The funding mix between major procurement and stock fund purchases, as requested in the Fiscal Year 1986 Department of Defense Budget, deals fairly with the Guard and Reserve and provides an appropriate balance of funds.

RECRUITING AND ADVERTISING

QUESTION: Provide the amount by reserve component budgeted for recruiting and advertising for FY 1984 through FY 1986. Also provide the number of recruiters and accession goals for the same period.

ANSWER: The following table provides the requested information:

Reserve Component Enlisted Recruiting & Advertising Budgets,
Production Recruiters (man-years) and Accession Requirements
(FY 1984 - FY 1986)

Component/FY	Recruiting and Advertising ($ in millions)	Production Recruiters (man-years)	Accessions (in thousands)
Army National Guard			
FY 1984	133.6	1745	85.5
FY 1985	158.3	2214	86.9
FY 1986	180.9	2482	99.0
Army Reserve			
FY 1984	88.2	1260	69.5
FY 1985	112.6	1534	70.1
FY 1986	134.3	1789	75.0
Navy Reserve			
FY 1984	25.3	621	29.9
FY 1985	36.6	828	31.0
FY 1986	51.5	967	34.2
Marine Corps Reserve			
FY 1984	14.3	186	12.9
FY 1985	16.4	214	14.0
FY 1986	17.0	214	14.8
Air National Guard			
FY 1984	21.0	381	12.7
FY 1985	23.4	395	13.5
FY 1986	26.3	413	14.0
Air Force Reserve			
FY 1984	15.2	223	11.2
FY 1985	18.3	248	14.7
FY 1986	19.8	265	14.2

* Includes funds for enlistment incentives, military and civilian pay, advertising, and recruiting support.

RECRUITING AND ADVERTISING

QUESTION: What type of support and how much do the Guard and Reserve forces receive from the Active components?

ANSWER: The support breakout by Service is as follows:

Army: The Army Recruiting Command (USAREC) is responsible for active and reserve enlisted recruiting. Management and general support of both missions including advertising, personnel management, training, logistic support, market research and analysis, and management information is provided by a single organizational structure. While USAREC recruiters are assigned either a reserve or active force goal, referrals are made as appropriate between active and reserve recruiters. Army National Guard recruiting is done by the States.

Navy: Until FY 1984, the Navy Recruiting Command (CRUITCOM) was responsible for recruiting all non-prior service enlisted recruits for the Navy Reserve. The Navy Reserve (NAVRES) was responsible for prior service recruiting. In FY 1984, NAVRES assumed responsibility for the expanded Sea and Air Mariner (SAM) program. CRUITCOM provided extensive support during the FY 1984 transition period and has continued to assist NAVRES to achieve its non-prior service recruiting requirements. This support includes provision of marketing information and analysis, recruiter training, advertising management, educational specialist support, and referrals. The active and reserve recruiter share recruiting offices.

Marine Corps: The regular recruiting force is responsible for satisfying the non-prior service recruiting requirements for the Reserves. Prior service recruiting is the responsibility of the Marine Corps Reserve.

Air Force: While active and reserve recruiting for the Air Force is done by separate organizations and recruiting for the Air National Guard is done by the States, the recruiting actively within the total force is coordinated at all levels. At the national level, advertising for the Air Force Reserve is produced in exactly the same manner as for the active force programs. Literature on specific career fields, basic training, and other aspects of military life is produced for all components under the national program. Likewise, Reserve, Guard, and Active recruiters are trained in the same school. This formal cooperation is mirrored by informal agreements down to the unit locations. Active component recruiters share offices with reserve force recruiters and reserve and guard recruiters provide itinerary stops for active recruiters. Joint participation in job fairs, conventions, school visits, base open houses, and other civic events is also common.

RECRUITING AND ADVERTISING

QUESTION: With a larger budget, aren't the Guard and Reserve forces in fact competing with the active forces for new recruits?

ANSWER: Undoubtedly, there will be some competition for new recruits between the active and reserve forces. However, there are significant differences in the dynamics of active and reserve force recruiting that suggest the two are not entirely comparable.

First, the reserve components rely heavily on prior service personnel to meet accession objectives. Prior service accession goals for the active force are quite limited, hence there is very little competition for this source of manpower.

Secondly, with respect to non-prior service recruiting, there is evidence that, while both propensity to join the active forces and propensity to join the reserve are related to a positive orientation toward military service, only about one-half of those with a positive propensity for active duty also have positive propensity toward joining the reserve components. Other potential recruits are oriented only toward Guard and Reserve service and the youth population that is not generally disposed toward military service is sufficiently large to be mined for both active and reserve force recruits without significant overlap.

Most importantly, reserve recruiting is sensitive to local demographic influences that may or may not reflect nationwide trends in available manpower. Shortages in critical skills or units cannot be made up through the assignment process. Reserve commanders and recruiters must meet unit needs from within the area or community where the unit is located.

LIGHT DIVISION ROUNDOUT

QUESTION: When will a Guard Brigade be selected to roundout the 6th Light Infantry Division in Alaska?

ANSWER: The Reserve Component unit to roundout the 6th Infantry Division (Light) has not been selected. Candidate units are being identified from both the US Army Reserve and the Army National Guard. Factors such as impact on current mission, unit deployability, and cost of conversion to light infantry design will be considered in the decision making process.

ARMY RESERVE OFFICERS' TRAINING CORPS (ROTC) ENROLLMENT

QUESTION: While Army Reserve Basic Camp ROTC enrollment has remained stable, Advanced Camp ROTC enrollment has increased from an average of 9,477 in FY 1984 to a projected average of 12,038 in FY 1986.

Please explain this advanced camp program in detail and justify the large growth in enrollment.

ANSWER: The six-week ROTC Basic Camp provides an alternative to the freshman [Military Science (MS) I] and sophomore (MS II) years of ROTC in the classroom; after completing the Basic Camp, college students may begin their classroom ROTC with MS III. Only 25% of ROTC cadets attend the Basic Camp as a qualifier for entry into MS III.

On the other hand, all ROTC cadets are required to attend the six-week Advanced Camp, usually between their junior and senior years. Advanced Camp gives cadets the chance to practice what they've learned in the classroom and introduces them to Army life "in the field."

Advanced Camps are conducted at Fort Bragg, North Carolina; Fort Riley, Kansas; and Fort Lewis, Washington. Successful completion of the Advanced Camp is required for commissioning. Primary subjects taught and evaluated include small-unit tactics, leadership in stress situations, rifle marksmanship, land navigation, and physical fitness. Other significant subjects taught include special-purpose weapons; communications; nuclear, biological, and chemical operations; and the call for and adjustment of artillery fire.

The FY 1986 Advanced Camp enrollment projection is 12,038 because it reflects enrollment needed to meet the rapidly increasing officer production mission of ROTC.

REGIONAL TRAINING CENTERS

The Committee understands a prototype Army National Guard Regional Training Center is scheduled for construction at Fort Dix, New Jersey, in FY 1986.

QUESTION: When will this facility be operational?

ANSWER: The Fort Dix Regional Training Center (RTC) will be operational in FY 87.

QUESTION: Describe the training to be performed at this center.

ANSWER: The Regional Training Center will provide Military Occupational Skill training with emphasis on academics and use of weapons devices and training simulators.

QUESTION: What are the estimated annual costs of equipping, manning, and operating this facility?

ANSWER: The estimated annual cost is $1.53 million.

QUESTION: How many Regional Training Centers does the Army National Guard propose to build?

ANSWER: One additional Regional Training Center is being proposed for future construction.

QUESTION: Does the Army Reserve have plans for such multipurpose unit training facilities.

ANSWER: The Army Reserve has no plans for a Regional Training Center; however the United States Army Reserve will use the centers being developed by the Army National Guard.

TACFIRE AND FIREFINDER

QUESTION: Please elaborate on the problems experienced with TACFIRE and FIREFINDER.

ANSWER: The low return rate of TACFIRE parts to the appropriate depot for repair and subsequent return to the supply system caused a shortage of repair parts. Army Materiel Command is taking appropriate actions to correct this problem. In Aug 84, fielding of all TACFIRE sets was postponed until sufficient repair parts were available to support units currently equipped and those being fielded. When the repair parts situation was analyzed it was determined that fielding must be delayed.

FIREFINDER fielding was delayed due to of a lack of repair parts to support fielding. Parts packages were diverted in late FY83 to support a classified requirement.

Delays in fielding both systems required the affected units to reprogram personnel, training and logistical requirements needed to support each fielding. Each of these areas require personnel to be available when the major items and support material are fielded.

QUESTION: When will these problems be corrected?

ANSWER: The Army National Guard was scheduled to field two (2) TACFIRE sets 1st quarter FY85. The revised schedule includes the first set, fielded during 2d Quarter FY85, and a second set to be fielded 4th Quarter FY86.

FIREFINDER fielding to ARNG units has resumed. The first fielding was conducted in April 1985.

QUESTION: What is included in the FY86 budget to correct these problems?

ANSWER: Operation and Maintenance, Army National Guard (OMARNG) FY86 budget request includes $1.2 million to support fielding and sustaining of FIREFINDER. No specific funds have been identified for TACFIRE.

REPAIR PARTS

QUESTION: Explain why your repair parts backlog increases from $95.0 million in FY 1985 to $138.6 million in FY 1986 even though the program is increasing $36.5 million to a total of approximately $225.6 million.

ANSWER: The Army National Guard (ARNG) FY 1986 repair parts backlog is caused by a significant growth in requirements of $80.1 million from FY 1985 to FY 1986.

($ in Millions)

Repair Parts	FY 1985		FY 1986
Requirements	$284.1	Increased $80.1	$364.2
Funding Allocation	$189.1	Increased $36.5	$225.6
Backlog	$ 95.0	Increased $43.6	$138.6

The projected $80.1 million increase is caused by Force Modernization planned new equipment issues and to a revision in the Army's repair parts stockage policy that prescribes mandatory combat essential repair parts on hand stockage levels to support mobilization and deployment readiness. The Army National Guard repair parts stockage requirement will be further increased by the Army National Guard's FY 1986 conversion to the Army's standardized automated stock record accounting system. This conversion will increase the Army National Guard's requirement for demand support repair parts stockage by an estimated twenty-five percent.

QUESTION: How does the $138.6 million backlog impact on materiel readiness?

ANSWER: The FY 1986 $138.6 million backlog should not adversely impact on the Army National Guard's capability to provide satisfactory day-to-day maintenance operations in support of training. However, the backlog will seriously decrease the Army National Guard's capability to increase repair parts stockage support to the readiness levels needed to meet mobilization, deployment, and initial wartime operational requirements.

TRAINING SUPPORT

QUESTION: Provide a description of the Regional Maintenance Training Site program - when the program started, how much is budgeted from FY 1984 to 1986, where the sites are, and when they are scheduled to be operational.

ANSWER: Regional Maintenance Training Sites are being developed to provide individual Maintenance Military Occupational Skill transition and sustainment training on current and force modernization systems. The first operational Regional Maintenance Training Sites are planned for FY 1986. $2.09 million is identified in FY 1986 in the President's Budget. The Army National Guard is planning for the operations of fourteen Regional Maintenance Training Sites as follows:

Fort Bragg, North Carolina	FY 86
Camp Shelby, Mississippi	FY 86
Fort Dix, New Jersey	FY 87
Custer Reserve Forces Training Center, Michigan	FY 87
Camp Dodge, Iowa	FY 87
Fort Stewart, Georgia	FY 87
Camp Roberts, California	FY 88
Camp Blanding, Florida	FY 88
Camp Ripley, Minnesota	FY 88
Camp Perry, Ohio	FY 89
Fort Ruger, Hawaii	FY 89
Fort Riley, Kansas	FY 89
Gowen Field, Idaho	FY 90
Fort Drum, New York	FY 90

QUESTION: How is training for this effort currently provided?

ANSWER: The type of training provided at these centers is not provided except during initial entry training.

QUESTION: Is this program in the budget?

ANSWER: Yes, the funds to support two sites are in the FY 1986 President's Budget.

QUESTION: If so, why was it not included in the justification book?

ANSWER: The Regional Maintenance Training Site projects is a new program and through an oversight the details were not included in the justification book.

ARMY CONTINUING EDUCATION SYSTEM (ACES)

QUESTION: Provide a detailed description of the Army Continuing Education System (ACES) including the type of assistance offered and who is eligible to receive such assistance.

ANSWER: All drilling Army National Guard personnel not receiving tuition assistance from other sources will be eligible for the Army Continuing Education System (ACES). The following educational opportunities will be available: counseling, College Level Examination Program (CLEP) and GED testing, and tuition assistance for education (high school through graduate level - 75 percent tuition assistance for any college level course). The Army Continuing Education System is designed for students taking less than 6 semester hours. This differs from the GI Bill benefit which is for individuals taking 6 semester hours or more of undergraduate college work only.

QUESTION: Why is the Army expanding this program to the Army National Guard? Are there plans to expand ACES to the Army Reserve?

ANSWER: As part of the Total Army Officer Accession Plan, officer accession planning has focused on achieving a baccalaureate degree education level for all commissioned officers. Under this plan, the Army National Guard and United States Army Reserve officers will meet the same requirements established for the Total Army. The Army will extend the Army Continuing Education System on 1 October 1985 to the Army National Guard and the United States Army Reserve to increase the civilian education levels of personnel.

QUESTION: Why is this program included in the recruiting budget?

ANSWER: The Army Continuing Education System is considered a retention enhancer and therefore it has been placed in the recruiting and retention account until a more appropriate coding can be determined.

QUESTION: The Army National Guard is also implementing the Assistance for Military Professional Development in fiscal year 1986. How is this program different from the Army Continuing Education System (ACES)?

ANSWER: The Assistance for Military Professional Development program is a temporary program for commissioned officers which ends when the Army Continuing Education System starts in fiscal year 1986.

TRAINING SUPPORT

QUESTION: Provide a description of the ARNG Medical Regional Training Site Program.

ANSWER: ARNG hospital units lack both personnel and the physical facilities necessary to store and maintain, at home station, complete sets of hospital equipment. The purpose of ARNG Regional Medical Training Sites is to provide cost effective accessibility for training of complete sets of Deployable Medical Systems hospital equipment. Each site will store, issue, maintain and replenish one complete set of hospital equipment. Further, staff at the site will constitute a training team which will instruct using units on the new deployable medical systems equipment. Sites will be geographically dispersed to support the distribution of ARNG hospital units. Equipment in the sites will, finally, be immediately available to support mobilization and deployment.

QUESTION: When is the program planned to start?

ANSWER: The first ARNG medical regional training site is programmed for construction and activation in Fiscal Year 88, concurrent with the first programmed deliveries of deployable medical systems hospital equipment for the ARNG.

QUESTION: How is medical training currently being provided?

ANSWER: ARNG hospital units currently train using Medical Unit Self-Contained, Transportable (MUST) equipment. Shortages of MUST equipment, as well as inability of units to store and maintain complete sets of equipment at home stations, have limited issue to four medical equipment sets per hospital. An ARNG Evacuation Hospital would, when mobilized, be assigned forty-four medical equipment sets. Some MUST equipment is borrowed from active component hospital units to support ARNG annual training. Loans are limited by limited active component equipment assets and by potential negative impact on active component training and readiness.

QUESTION: Will medical equipment be bought? What type of equipment, when and how much is budgeted?

ANSWER: The Army Surgeon General is managing procurement of the new Deployable Medical Systems family hospital equipment for all Table of Organization and Equipment (TOE) Army hospital units, to include twenty-five ARNG hospitals. Four of those twenty-five sets will be placed in ARNG Regional Medical Training Sites. Upon mobilization, four ARNG hospitals will deploy with those sets of equipment. No hospital equipment will be procured solely to equip ARNG Medical Regional Training Sites.

SPECIALTY SHORTAGES

Question: What is being done to fill medical shortage specialties - such as operation room (OR) nurses?

Answer: Recruiting is being focused on filling specific medical shortage specialties. Specific missions have been assigned to the U.S. Army Recruiting Command to recruit into these specialties. As a result, 78 operating room nurses joined the Army Reserve in FY 84. The recruiting command has been missioned to recruit 90 OR nurses in FY 85. It is anticipated that they will reach this goal. Also, the Army Nurse Corps Reserve Component Operating Room Course, initiated in the last quarter of FY 84, will train up to 30 nurses, each year in this specialty.

RESERVE COMPONENTS OPERATING ROOM NURSE COURSE

QUESTION: Provide a description of the Reserve Components Operating Room Nurse Course and the status of the program.

ANSWER: The Operating Room Nursing Course, Reserve Component is a two phase (didactic and clinical) course. Phase I is presently conducted at Fitzsimons Army Medical Center (FAMC) during an eight week period. Upon successful completion of Phase I, the officer will be qualified for an Additional Skill Identifier (ASI) of 8H (Clinic Staff Nurse, Operating Room Procedures, Beginning Level). Phase II is completed at home station and includes 160 hours of clinical experience, attendance to selected seminars, and, at a testing site, a written and practical examination.

Phase I is designed to teach basic operating room nursing skills required to function at an introductory level in a U.S. Army Medical treatment facilities operating room. This is an eight week course consisting of two parts. It is designed around the concepts and standards of perioperative nursing practice. All evaluation focuses upon these standards as well as the basic competencies developed by the Association of Operating Room Nurses (AORN). The first part of this eight week course is instruction of theories, principles, and concepts of perioperative nursing. The last part is the practical application of those concepts and principles as well as development of clinical skills necessary to render safe and adequate nursing care to the patients during surgical intervention.

Phase II is completed at the officer's home station and consists of a combination of clinical experience and attendance to selected seminars. After satisfactorily completing those requirements, the officer will go to an Army Medical Facility (presently located at FAMC) to complete a comprehensive written examination and performance evaluation. Upon successful completion of stated requirements, the officer will be eligible to apply for the Special Skill Identifier (SSI) 66E (Operating Room Nurse).

QUESTION: How many OR nurses were produced in FY 1984? In FY 1985?

ANSWER: Two Army National Guard (ARNG) and four Army Reserve students completed Phase I in FY 1984 and are currently completing Phase II at home station. Actual attendance to date for FY 1985 in Phase I is 10 Army Reserve and no ARNG. An additional two ARNG and six Army Reserve students are scheduled to enter training in May 1985.

SPECIALTY SHORTAGES

Question: What other specialties are experiencing shortages and what is being done to fill these specialties?

Answer: Other specialties experiencing shortages are the nurse anesthetist and medical corps (surgical) specialties. Recruiting is aimed specifically at filling these shortage specialties. In FY 84 37 nurse anesthetists were recruited into the Army Reserve. Recruiting command has been tasked to recruit 40 nurse anesthetists in FY 85. It is anticipated that they will meet this goal.

MOBILIZATION EXERCISES INITIATIVES

QUESTION: Provide a description of the initiative to provide funding for Army Reserve troop units to conduct mobilization field exercises.

ANSWER: Currently Mobilization Exercise (MOBEX) support (Joint Chiefs of Staff (JCS) exercises) is the only funded mobilization field exercise initiative from Fiscal Year 1984 through Fiscal Year 1986.

MOBEX support (JCS exercises) provides funds for all United States Army Reserve participation in biennial JCS-directed and JCS-coordinated exercise programs; approximately 10 directed and 50 coordinated exercises per year. Included are Major Army Command (MACOM) support of Commander in Chief (CINC) sponsored exercises, major deployment exercises, Rapid Deployment Joint Task Force (RDJTF) exercises in Continental United States (CONUS) and Southwest Asia (SWA), and JCS Command Post Exercises (CPXs) to include MOBEX.

QUESTION: Does this include overseas deployment training?

ANSWER: No. Overseas deployment training is funded by the CAPSTONE and Overseas Deployment Training initiatives.

QUESTION: What are the costs associated with this initiative for FY 1984 to FY 1986 and how many units are involved?

ANSWER: Total funding in the Fiscal Year 1984 through Fiscal Year 1986 time period for MOBEX support (JCS exercises) is: FY 84 - $659,000; FY 85 - $3,576,000; FY 86 - $730,000. This supports participation by 1,844 United States Army Reserve units biennially.

SPECIAL TRAINING ACTIVITY

QUESTION: How much money are you spending to train Army reservists to compete in national and international events?

ANSWER: The totals shown below for each FY, provide for the program which starts at unit level and progresses, through eliminations to the national/international level. The program includes unit members as well as individual ready reservists. The dollar totals shown include both special training funds and mobilization training funds.

FY 84	FY 85	FY 86
$1.864 million	$1.622 million	$1.692 million

QUESTION: How does training to compete in the Olympic Games and other such events improve military readiness?

ANSWER: This training develops and refines the most basic of soldierly skills - that of effective use of individual weapons. The participants in this training become highly skilled instructors used to impart their knowledge to others who will teach marksmanship. The participants provide instruction and assistance to USAR and ROTC units. The competitive success of these individuals enhances their credibility as instructors. An intangible benefit of the success of members engaged in this program is the public view of the USAR as a capable and viable force. Public awareness of success contributes to recruiting for the USAR, thus helping to maintain unit strength adding to the readiness of the Army Reserve.

QUESTION: What other training efforts are included in the Special Training line?

ANSWER: The items included in the special training line are: command/staff supervision, exercises, management support, operational training, recruiting, retention, service mission/mission support.

QUESTION: Breakout the costs of these efforts for FY 1984 through FY 1986.

ANSWER: The costs associated with each of these other special training efforts are:

	FY 84 (actual)	FY 85 (est)	FY 86 (est)
Command/Staff Supervision	$ 7.303 million	$7.506 million	$7.742 million
Exercises	$ 9.517 million	$29.416 million	$30.466 million
Management Support	$19.865 million	$ 8.588 million	$ 8.850 million
Operational Training	$22.974 million	$57.122 million	$57.429 million
Recruiting	$ 1.127 million	$ 2.402 million	$ 2.474 million
Retention	$ 2.257 million	$ 1.761 million	$ 1.840 million
Service Mission/Mission Support	$ 1.565 million	$ 1.131 million	$ 1.166 million

"OVER 40" CARDIOVASCULAR SCREENING PROGRAM

QUESTION:

Why are you conducting a pilot program for Army Reserve component soldiers when the Active component requires all soldiers age 40 and over to undergo cardiovascular screening?

ANSWER:

The pilot program is being conducted as a feasibility study. It would be impossible to screen the large number of Army National Guard and Army Reserve soldiers age 40 and over at Army Medical Treatment Facilities (MTFs). Also, many Reserve Component (RC) soldiers are located in parts of the United States where there are no MTFs. Furthermore, since these soldiers are not on full-time active duty, their entitlements are different from their Active Component (AC) counterparts. There is also a perception that a difference exists between the physical conditioning of AC and RC soldiers. The Army has a desire to proceed with caution; it does not want to kill or disable RC soldiers. By conducting a pilot program prior to implementation of a nationwide program, methods other than use of Army MTFs can be developed to accomplish the cardiovascular screen of our RC personnel. The pilot program will insure that the nationwide program is well thought out and is the most cost-effective program available.

QUESTION:

What is the cost of this program in FY 1985 and FY 1986, and what will be the cost of the program when it is expanded to all states?

ANSWER:

It is anticipated that the program will cost $3 million in FY 85. In FY 86, with the addition of Phases III and IV and late FY 86 expansion to other parts of the country, the program will cost $6 million. In FY 87 the program will cost $10 million. It is projected that by FY 88, when the program is expanded to all states, the program will cost $15-20 million annually.

TRAINING EQUIPMENT

QUESTION: The Army Reserve initiated the Minimum Essential Equipment for Training (MEET) Program in 1983 to remedy equipment shortages that impair training. What is the current status of this program?

ANSWER: The MEET program resulted from a Vice Chief of Staff, Army initiative to improve the training readiness of later deploying Reserve Component units. The current institutionalization of MEET will include all Reserve Component Units and will encompass additional items of equipment.

QUESTION: What is the cost of this program for FY 1984 through FY 1986?

ANSWER: The MEET program involves changing the priority for issuing equipment within the Army system. Designated MEET Equipment has been distributed from Army Assets and will be redirected from Future Army procurement. The Total cost of this equipment is 80.6 million dollars (51.3 million for the ARNG and 29.3 million for the USAR).

QUESTION: What will be the shortage at the end of FY 86?

ANSWER: The initial MEET program distribution included about 500 LIN's of equipment which were applicable to about 600 UIC's. It is anticipated that this initial distribution of equipment will be completed by the end of FY 86. The current initiative to institutionalize the MEET program will incorporate all Reserve Component Units and will be included in the normal distribution process. This program will be reviewed annually.

FORT DRUM

QUESTION: The O&M Army Reserve budget transfers $17.3 million to the Army O&M account for the reactivation of Ft. Drum, NY in FY 1986. $16.9 million of this transfer shows as a decrease in Real Property Maintenance and Base Operation Support. The Army Reserve budget also requests an $18.1 million increase over the FY 1985 program for base operations and real property maintenance. What is the justification for this increase?

ANSWER: The increase of $10M for Real Property Maintenance and $8.1M for Base Operations support is necessary to halt growth in the OMAR Backlog of Maintenance and Repair (BMAR) level and make significant progress toward reaching the containment level, established by Congress, of $46.2 million by FY 1988. Base Operations growth will fund some pressing unfinanced requirements in the Unaccompanied Personnel Housing Furnishings areas, allow for expanded KP contracts to support larger Annual Training populations, provide extensive required dry dock maintenance to USAR watercraft, allow for the upgrade of out-of-date IBM control units, and allow for expansion of the JACS RC program to provide better pay support for reservists.

QUESTION: If Ft. Drum had not been transferred from the Army Reserve O&M budget, would your request for Real Property Maintenance and Base Operations Support have been the same in FY 1986?

ANSWER: Yes. The transfer of Ft. Drum had a $12 million impact on the OMAR BMAR level, but the total FY 1986 RPMA request is still necessary to reach the containment level by the end of FY 1988. The transfer of Ft. Drum had a small impact on the OMAR Base Operations unfinanced requirement. The majority of the larger Base Operations unfinanced requirements are located at Forts Pickett, Hill, and Chaffee. The FY 1986 Base Operations funding request will allow us to satisfy many long term funding problems and better support the reservist during training.

SEA/AIR MARINER PROGRAM

QUESTION: How many officers have you accessed to date through the new Officer Sea and Air Mariner Program? What are your projected accessions for FY 1985-1990?

ANSWER: The Officer Sea/Air Mariner recruiting effort has produced 61 individuals, either in the program or in processing, toward the FY-85 goal of 75. The recruiting/accession plan for FY-85 - FY-89 is:

FY	85	86	87	88	89	90
Goal	75	150	300	450	536	UNK

SEA/AIR MARINER PROGRAM

QUESTION: The Navy was directed by Congress to submit a report by March 1, 1985, addressing skill training shortages for enlisted Sea and Air Mariners. When will this report be completed?

ANSWER: Navy will complete the skill training shortages report for enlisted Sea and Air Mariners by 1 June 1985.

NAVAL RESERVE BONUS INITIATIVES

QUESTION: Funding is included in the legislative contingencies account for two new Navy Reserve bonus/special pay initiatives--$.8 million for incentive pay to certain Navy Reservists and $1.5 million for a new TAR Selective Reenlistment Bonus.

Please describe both of these requested new entitlements, provide your justification for their inception, and detail funding requirements from FY 1986-1990.

ANSWER: The legislative proposal requests authority to pay a very limited number of enlisted Selected Reservists a special pay subject to regulation prescribed by the Secretary of Defense. Each year's program will be subject to policy and funding review within Navy and OSD and by the Congress. Unit Incentive Pay is required to entice Reservists to affiliate with hard-to-man units, such as NRF ships.

Reservists on these ships must attend a Friday evening drill to prepare for the weekend, and are underway from early Saturday morning until Sunday evening. In order to operate safely and effectively, Reserve personnel affiliated with NRF ships are required to maintain a high level of operational, maintenance and training readiness. In addition to rate training, general military training and performing administrative duties, these Reservists must maintain watch stations and duty section qualifications. This results in 8-16 hour drill days whether underway or inport as opposed to 8 hour drill days for those Reservists assigned to shore based Reserve units. Active duty sailors receive career sea pay as an incentive to accept this arduous life and family separation. Reservists receive career sea pay during active duty for training (ACDUTRA), but do not receive any incentive compensation for sea duty during drill weekends.

Unit Incentive Pay will result in higher manning levels of critical units and in the drilling participation rate of Reservists assigned to those units. Readiness of those units authorized unit incentive pay will be increased. The Mobilization Concepts Development Center, National Defense University conducted a study and estimated that a $10 per drill pay incentive paid to personnel assigned to arduous duty units such as NRF ships would increase participation from 83% to 95%.

While Unit Incentive Pay would be targeted to critical units, other Navy SELRES incentives are targeted to critical ratings. SELRES incentives encourage a Reservist in a critical rating to enlist, reenlist or affiliate in the Reserve, but do not entice him to affiliate where we need him. In today's All Volunteer Force structure, a member with a critical skill can, of his own volition, leave one unit (an NRF ship for example) and affiliate with another unit that has a vacant billet in his rating. The member also has the option of transferring to another service Reserve component if he or she grows dissatisfied with drilling in the Naval Reserve. Attempts to man NRF ships on a "mandatory" basis have precipitated both these situations. In addition, SELRES incentives do nothing to entice a Reservist in a non-critical rating whom we, nonetheless, need in units such as NRF ships.

CIVILIAN PERSONNEL AUDIT TRACK

QUESTION: Provide a breakout of the civilian personnel request tracking from the FY 1985 Appropriated amount (civilian personnel dollars only) to the FY 1985 Current Estimate and then to the FY 1986 Budget Request, highlighting the annualization of the FY 1984 4% pay raise, the annualization of the FY 1985 3.5% pay raise, the FY 1986 5% pay reduction and any increase or decrease in civilian end strength/workyears.

ANSWER: The requested information follows:

DIRECT FUNDED CIVILIAN PERSONNEL TRACK

ACTIVITY GROUP	FISCAL YEAR 1985				FISCAL YEAR 1986					
	APPROPRIATION $000	ANNUALIZATION FY84 PAY RAISE	PAY SUPP	CURRENT $000	INCREASED ES	END STRENGTH/WORKYEARS WY	END STRENGTH/WORKYEARS $000	ANNUALIZATION FY85 PAY RAISE	PAY REDUCTION (5%) $000	BUDGET REQUEST $000
F4-M R P	6710	(30)	131	6841	8	4	85	166	-267	6825
F3-B O S	57286	(311)	1375	58661	69	30	518	698	-2189	57688
5T-MGT HQ	3217	(18)	78	3295	18	8	149	23	-130	3337
5Y-RECRUITING	357	(4)	16	373	0	0	-3	3	-14	359
TOTALS	67570	(363)	1600	69170	95	42	749	890	-2600	68209

"INCREASED CIVILIAN END STRENGTH/WORKYEARS DUE TO NAVY MANPOWER MOBILIZATION (NAMMOS) AND TOTAL FORCE INITIATIVE."

"ANNUALIZATION OF FY84 PAY RAISE IS A NON-ADD COLUMN; AMOUNT IS INCLUDED IN THE APPROPRIATION COLUMN."

NEW RESERVE EQUIPMENT

QUESTION: Provide a list of major equipment to be fielded in FY 1985 and FY 1986, the quantity of the equipment, and which quarter they will be fielded. Also identify the O&M costs associated with fielding this equipment, breaking out civilian personnel support costs, repair parts, and depot maintenance and repair costs.

ANSWER: The ships and aircraft to be fielded in the Naval Reserve in FY 1985 and FY 1986 and associated O&MNR budgeted costs (where applicable) are displayed in the exhibits below. Additionally, the following major equipment will be fielded in the Naval Reserve in FY 1985 and FY 1986.

Equipment	FY 1985	FY 1986
Forklifts	0	69
Other MHE	0	53
Trucks	5	60
Tractors	0	11
Other CESE	0	54

O&MNR Support Costs for Aircraft
Joining the Naval Air Reserve Force
$(Millions)

FY 1985

TYPE	QTR				CIV	TEST	DEPOT MAINT
ACFT	1ST	2ND	3RD	4TH	PERS	EQUIP	REPAIR
P3B	4	3	1	0	2.12	0.141	1.28
A7E	0	0	0	4	1.3	0.0	7.052
F/A-18	0	0	0	0	0.0	0.0	0.0
SH-2F	2	3	5	2	0.405	0.9	1.801
F-14A	4	2	5	6	0.760	0.0	1.846
UH-60	0	0	1	0	0.0	0.102	0.0

FY 1986

TYPE	QTR				CIV	TEST	DEPOT MAINT
ACFT	1ST	2ND	3RD	4TH	PERS	EQUIP	REPAIR
P3B	2	10	1	0	2.816	0.089	2.04
A7E	3	3	6	5	1.9	0.142	10.970
F/A-18	3	6	3	3	0.500	0.0	1.01
SH-2F	0	6	3	3	0.450	0.0	2.041
F-14A	2	5	0	0	0.890	1.3	9.428
UH-60	1	0	0	0	0.180	0.0	0.22

Note 1: No increase in CIVPERS (GS Type). Figure represents OMNR $ for Contractor Engineering Technical Services.

NEW RESERVE EQUIPMENT

SHIPS JOINING THE NAVAL RESERVE FORCE (NRF)

FY 1985

SHIP TYPE	QTY	1ST QTR	2ND QTR	3RD QTR	4TH QTR
FFG-7	2	0	0	1	1

FY 1986

SHIP TYPE	QTY	1ST QTR	2ND QTR	3RD QTR	4TH QTR
FFG-7	4	0	1	1	2
ARS	3	0	0	0	3

O&MNR SUPPORT COSTS FOR SHIPS JOINING NRF
($000)
FY 1985

SHIP TYPE	FUEL	UTIL	REPAIR	OPTAR	IMA	EMERGENT REPAIR	SRA	CIVPERS
FFG-7	1200	507	2253	1033	241	130	300	0
				FY 1986				
FFG-7	1146	1087	2029	838	604	375	0	0
ARS	41	193	66	44	220	516	0	0

DEPOT MAINTENANCE

QUESTION: Provide a list of equipment scheduled for depot maintenance by type of equipment, quantity, total and unit costs for FY 1984-FY 1986.

(Clerk's note: The report is retained in the subcommittee files.)

FLYING HOUR PROGRAM

QUESTION: What is driving the C-9 flying hour program? How many more C-9's are you receiving in FY 1986?

ANSWER: C-9 flying hours are driven by Department of the Navy world-wide airlift requirements. The allocation of hours is determined from historical data, as well as projected known Department of the Navy air logistics needs. Hours necessary for training are also computed to arrive at the total C-9 flight hour program. We plan to complete the C-9 buy in FY 1985.

QUESTION: The cost per flight hour is broken down between fuel, aviation depot level reparable, and other. Provide an explanation for those aircraft listed below that experience either an increase or a substantial decrease in the "other" category.

Increases:	Decreases:
P-3B	F-14A
SAU	SH-2F
A-4E(VC)	C-9B
F-4N	DC-9
KC-130F	F-4S
EA-6A	CH-53

ANSWER: The increases in the "other" category of the cost per hour occur because:

Type A/C	Reason
P-3B/SAU	Both programs undergo substantial transition and growth in FY 1986 resulting in personnel turnover and increased maintenance actions. Personnel turnover increases costs for flight equipment and changing/updating equipment usually requires more frequent, more expensive maintenance efforts.
A-4E (VC)/F-4N/KC-130F	These increases are the result of a computer predicted calculation based on an increasing trend experienced in FY 1984 and FY 1985.

EA-6A(Marines)	The increased costs reflect charges applied for engine work in support of the Hourly Engine Maintenance Program (HEMP) and Hot Section Inspection (HSI) program which previously were not charged to end users.

The decreases in the "other" category of the cost per hour occur because:

F-14A/SH-2F/F-4S	The FY 1985 budget was based on active fleet cost estimates because of the newness of these type aircraft to the Reserve inventory. Actual experience has revealed lower than anticipated costs necessitating a change in the FY 1986 budget projection.
C-9B/DC-9	The "other" costs for these aircraft are mainly the result of negotiated contract maintenance costs. It is anticipated that the contract cost will decrease for FY 1986.
CH-53	This reduction is the result of a computer predicted calculation based on a decreasing trend experienced in FY 1985.

TOTAL FORCE INITIATIVES

QUESTION: Your statement highlights a number of initiatives from the FY 1984 Total Force Report that are now included in the FYDP. Which of these initiatives are included in the FY 1986 budget request? What is the amount budgeted for these initiatives in FY 1986? When are the other initiatives planned for new starts?

ANSWER: The following Total Force initiatives have been included in the FY-86 budget request: Reserve augmentation of hospital ships ($1.7 million requested in FY-86); net increase of two ships in the ARS inventory ($5.7 million in FY-86 includes O&MNR, MPN and RPN funds). The remaining initiatives do not impact the FY-86 budget request. VP TACNAVMOD upgrades were completely funded in FY-85. The NRF is scheduled to receive an LST in FY-90, an LSD in FY-91, and an LPD in FY-92. Landing Craft Air Cushion augment units are scheduled for FY-88. An additional Patrol Squadron (VP) Master Augment Unit (MAU) Flying P-3C aircraft is scheduled for FY-87 and a third MAU stands up in FY-88. The Reserve role in the airborne mine countermeasures mission will start in FY-87 through the addition of RH-53D aircraft. Fleet Oilers (AO-177 class) will be added to the NRF inventory starting in FY-89. Reserve augmentation of carrier-on-board delivery (COD) squadrons, originally planned for FY 88, is scheduled to begin in FY-86 for East Coast squadrons.

RESERVE SHIP OPERATIONS

QUESTION: Provide an explanation for the growth in repair parts in FY 1986.

ANSWER: The growth in ship repair parts in FY 1986 is associated with the growing size of the Naval Reserve Force. Specifically, the larger repair parts requirements attributable to the increase of four FFG-7 class ships and three ARS-40 class ships is only partially offset by the decommissioning of one MSO and one ARS-8 class ship. As the NRF ASW Frigate Program grows in size to its planned level of 26 ships by FY 1990, these larger, more sophisticated combatants will incur higher repair parts costs.

QUESTION: Provide a list of the Reserve ship inventory by class, number of hulls for FY 1984 through FY 1986.

ANSWER: The inventory of NRF ships follows:

Type	FY 1984	FY 1985	FY 1986
DD	1	1	1
FF-1052	6	6	6
FFG-7	3	5	9
LST	2	2	2
MSO	18	18	17
ATF	4	0	0
ARS	2	2	4
TOTAL	36	34	39

QUESTION: Provide a description of the Minecountermeasure Craft of Opportunity (COOP) program - when it started, the funding provided from FY 1984 - FY 1986, and what the program will look like in the future.

ANSWER: The Chief of Naval Operations approved the implementation of the Craft of Opportunity (COOP) Program in FY-85. The COOP concept is to identify, in peacetime, civilian craft that would best be suited for use as mine countermeasures craft with a minimum of alterations. COOP objectives are to train Naval Reservists, conduct "Q" route surveys in peacetime and to augment the mine countermeasures force for port breakouts in time of war. COOP is designed as a Naval Reserve Force (NRF) asset under the operational and administrative control of the fleet CINCS. The COOP program will be manned entirely by 900 Selected Reservists and 110 TARs.

The COOP program will utilize indigenous fishing trawlers specially equipped by the Navy to conduct mine warfare operations. Vessels will operate from 22 vital U.S. ports. Four nine-man enlisted crews will drill aboard each craft one weekend every month. Six initial COOP will be established in FY-85. These initial COOP will be followed by six COOP each in FY-86 and FY-87, and a final four COOP in FY-88 building to a total force level of 22 COOP trainers. An additional 66 COOP augmenting vessels will be identified for use in the event of mobilization as platforms for three of every four crews.

RESERVE SHIP OPERATIONS

FYDP (JAN 1985) funding and manning levels are provided below:

TOTAL FYDP FUNDING PROGRAMMED: ($K)

Funding	FY-84	FY-85	FY-86	FY-87	FY-88	FY-89	FY-90
RPN	0	1269	2997	4265	5036	5036	5036
OMNR	0	1800	1740	3429	3911	3723	4273
OPN	0	1051	1450	5744	5155	4968	549
TOTAL	0	4120	6187	13438	14102	13727	9858

TOTAL MANNING PROGRAMMED: (OFF/ENL)

TAR	0	0/24	6/64	6/88	6/104	6/104	6/104
SELRES	0	26/234	38/462	50/690	58/842	58/842	58/842

SHIP MAINTENANCE AND MODERNIZATION

QUESTION: Provide a list of Fleet Modernization Program (FMP) work planned for FY 1986 by ship and provide costs.

ANSWER: The following information summarizes FY 1986 Fleet Modernization Program costs concomitant with depot level maintenance:

Hull Number	Availability	Date	FMP Cost ($000)
FF 1054	PMA	2/86	1,487
FF 1060	PMA	5/86	1,304
FF 1061	PMA	1/86	741
FF 1072	PMA	5/86	1,761
FF 1091	PMA	7/86	1,711
FFG 7	SRA	1/86	3,378
FFG 12	DSRA	1/86	3,488
FFG 16	DSRA	5/86	4,556
LST 1190	DPMA	1/86	883
MSO 427	ROH	1/86	903
MSO 433	ROH	11/85	384
MSO 437	ROH	3/86	252
MSO 456	ROH	3/86	830
MSO 488	ROH	3/86	528
MSO 511	ROH	7/86	591
MSO 439	IDD	1/86	239
		Subtotal	23,036
Separate Funding (Items charged separate from scheduled availability)			2,223
Program Support			3,195
Advance Design/Material for subsequent year starts			2,231
	Total FMP		30,685

Note:
PMA - Phased Maintenance Availability
DPMA - Phased Maintenance Availability (includes dry docking)
SRA - Selected Restrictive Availability
DSRA - Selected Restrictive Availability (includes dry docking)
IDD - Interim Dry Docking
ROH - Regular Overhaul

QUESTION: Why is there an increase in Electronic Equipment/Modules in FY 1986 in the Planned Maintenance Program?

ANSWER: An increased number of electronic equipment modules will require restoration in FY 1986 as a result of the greater number of combatant ships entering the Naval Reserve Force (NRF) as well as changes to class maintenance plans. Funds will cover the repair and/or refurbishment of equipment removed during ship maintenance availabilities and returned to electronic maintenance pools for issue to support follow-on availabilities of NRF ships. 109 equipment modules will be refurbished in FY 1986 at a cost of $565,000 as compared to 41 modules in FY 1985 at a cost of $198,000.

RESERVE AIRCRAFT DEPOT MAINTENANCE

QUESTION: Provide a list of engines to be overhauled and repaired in FY 1985 and FY 1986.

ANSWER: The following table provides the requested information:

		FY 1985 Funded		FY 1986 Budget	
Type/Model/Series	Type of Work	Units	Total Cost	Units	Total Cost
A501D	Overhaul	2	393,000	2	434,904
J57P10	Overhaul	8	2,342,702	4	1,171351
J57P420	Overhaul			2	574,057
JT12A8N	Overhaul	3	513,702	3	568,478
JT89A	Overhaul	4	1,419,600	4	1,570,964
PT6A	Overhaul	12	1,148,412	6	635,430
R280052W	Overhaul	8	684,072		
T53L13	Overhaul	4	205,056	4	226,920
A501D	Repair	1	45,468	1	50,316
F404GE400	Repair	1	221,823	2	443,606
F404GE400A	Repair			1	21,428
F404GE400C	Repair	1	67,142	2	134,284
F404GE400F	Repair	3	130,667	4	181,620
F404GE400H	Repair	3	604,166	4	805,554
F404GE400L	Repair	2	124,099	3	186,149
J52P408	Repair	8	814,438	7	744,214
J52P6B	Repair	12	1,070,328	8	771,128
J52P8B	Repair	15	1,473,638	11	1,107,014
J57P10	Repair	8	755,114	7	662,870
J57P420	Repair	7	524,029		
J79GE10	Repair	26	3,029,865	11	1,304,811
J79GE8D	Repair	2	205,483		
JT128N	Repair	4	315,000	2	174,292
JT12A8NHS	Repair	1	32,886	4	145,568
JT8D9A	Repair	12	1,807,561	8	1,478,745
PT6A	Repair	4	136,000	3	112,875
T400CP400P	Repair	8	220,888	5	153,007
T56A10WAP	Repair	52	4,789,717	29	2,832,902
T56A14P	Repair	9	831,277	14	1,326,997
T56A16P	Repair	6	551,709	5	482,695
T56A425P	Repair	1	82,586	2	170,812
T56A426P	Repair	4	366,580	2	201,461
T58GE10	Repair	5	248,945	3	121,083
T58GE16	Repair	5	210,914	9	362,190
T58GE8F	Repair	8	298,525	11	419,343
T64GE6B	Repair	17	1,683,700	16	1,697,769
T76G418	Repair	3	114,829	3	124,655
T76G419	Repair	5	198,717	3	130,559
TF30P408	Repair	40	14,506,227	19	6,926,237
TF30P414	Repair	5	1,485,321	5	1,721,252
TF41A2	Repair	10	1,871,210	23	4,497,790
Gear Boxes/ Torque Meters	Overhaul	-	917,286	-	1,079,212
Gear Boxes/ Torque Meters	Repair	-	298,472	-	88,335
Special Repair	Repair	-	61,660		

RESERVE AIRCRAFT DEPOT MAINTENANCE

QUESTION: Why is there a backlog in the depot maintenance program? Provide an updated OP-30 exhibit which shows the unfunded depot maintenance program for FY 1984 through FY 1986.

ANSWER: Naval Reserve aircraft rework requirements are generated on the basis of projected force levels, force structure and the flying hour program. The requirements for FY 1986 were developed utilizing the most current requirement documents available at the time of formulation (Exhibit A-VII Depot Requirements Document (DRD) for airframes; the Exhibit OP-20 flying hour program for engines, and projected kit installation schedules for mods). The requirements are priced out and compared to funding constraints. When requirements exceed funding constraints, a decision is necessary as to what will be funded and what will remain unfunded and become part of the backlog.

BASE OPERATIONS SUPPORT

QUESTION: What medical training equipment are you buying for $883 thousand in FY 1986 and what is the value of the total program for FY 1984 through FY 1986?

ANSWER: The $883 thousand will be utilized to purchase medical training equipment and supplies at many of the 237 Reserve centers to enable basic and emergency medical skills to be taught, updated and maintained. Some of this equipment will be utilized to provide tests and examinations required for annual physical examinations, physical readiness evaluations and other retention determinations relating to mobilization readiness. The overall goal of medical training for Reserve component medical personnel is to achieve a level of peacetime medical readiness that will ensure maximum effectiveness of combat forces during wartime. Included in this training is the requirement for Medical Readiness Exercises to simulate field conditions and typical battle casualties. Equipment to be purchased includes CPR training manikins, moulage kits, audiometers, armed forces vision test equipment, EKG screening equipment and battle dressing kits. The total program requirement is $1.2 million.

QUESTION: What is being done under ADP improvements ($2,280 thousand) in FY 1986 and what is the amount of the total program?

ANSWER: The $2.2 million figure under ADP improvements is for the purchase of hardware and software to update the Reserve Training Support System (RTSS). The RTSS system provides a greatly expanded data gathering capability in regard to the reporting, tracking and collation of individual Selected Reservists' training, readiness and performance factors. The ADP equipment purchases will specifically allow for the update of RTSS training management at air sites and the full implementation of the RTSS system at surface field activities. The FY 1985 ADP total program is $16.7 million in the O&MNR Appropriation.

QUESTION: Provide a description of the Surface Reserve Training Improvements Program - how much funding for FY 1984 to FY 1986, the number of civilian and military strength assigned to this effort.

ANSWER: The Surface Reserve Training Improvements Program is a five year initiative to upgrade Surface Reserve training methodologies, equipment and procedures in order to meet the training requirements of providing a "trained" asset versus a "trainable" asset to mobilization sites. The funding supports instructional materials development, equipment and supplies purchases, and program printing requirements. The equipment and material will provide state-of-the-art methods of providing information tailored to the special needs of Surface Program Selected Reservists. The training materials and methodology address general military, specific equipment and skill areas within mobilization billet specifications. The overall concept represents a program specifically to address Surface Program training deficiencies and a recognition of the increased training requirements driven by expanded Naval Reserve missions and the modernization effort in progress in regard to the ship inventory within the Naval Reserve Force (NRF). Funding levels for the Surface Reserve Training Improvements Program are $2,188,937 in FY 1984, $3,737,433 in FY 1985 and $7,443,400 in FY 1986. There are three civilian and one military billets specifically assigned to this effort.

QUESTION: What equipment and materials are you buying in FY 1986 for the Surface Reserve Training Improvements program?

ANSWER: The following list represents FY 1986 plans for equipment and material purchases in support of the Surface Reserve Training Improvements program.

Development of 50 Qualification Study Packages (QSP) for FF-1052, FFG-7 and MCM1 programs as well as revision to existing QSP contracts.	$2,541,600
Development of 40 Reserve Billet Training Packages (RBTP) plus revisions to existing RBTPs.	1,640,000
Development of Software for use with the User Definable Training Console (Interactive Naval Reserve Instructional System) and videotapes for QSP watch stations.	1,750,000
Printing for 20 newly developed QSPs and 25 QSPs to be developed in 3rd and 4th quarters of FY-85.	500,000
Printing for revisions to P1500 Publications.	50,000
Printing for 250 Reserve Billet Training Plans and Guides.	200,000
Printing for 5-10 Naval Reserve Training Plans.	20,000
Revisions to Engineering Duty Officer Curricula.	1,000
Printing of Support Materials (Instructor Guides, Student Workbooks, Carousel Labels, Cassette Tape Labels, etc.).	366,800
Printing of Sea and Air Mariner Program materials to meet seaman and fireman training requirements.	100,000
Production of training support materials and supplies.	174,000
Video Players in sufficient quantity to complete field allowances.	100,000
TOTAL	$7,443,400

QUESTION: How much of the $555 thousand increase in FY 1986 for the Retired Pay Accrual effort is associated with the 50 additional civilian end strength? How many people are doing this in FY 1985?

ANSWER: $519 thousand of the $555 thousand increase in FY 1986 for the retired pay accrual effort is associated with the 50 additional civilian end strength. The remainder of the funding is for associated support costs. There are no people who are performing this function in FY 1985.

QUESTION: The performance criteria shows one less base in FY 1985. Is there a base closing in FY 1986? How many civilian and military end strength are associated with this base? What is the decrease from one less base?

ANSWER: The FY 1986 column for the number of bases should have read 277. No base closures are planned in FY 1986.

QUESTION. Why is the military end strength decreasing in Base Operations Support?

ANSWER. The decrease in enlisted military end strength under the program BOS is caused by: 1. The conversion of 567 canvasser recruiters from the MPN account to the RPN account; and 2. The transfer of 442 personnel of various ratings (e.g., RM, MS, HM and surface trainers) from USN to TAR which again realigns their salaries under the RPN account. The end strength reflected in the O&MNR budget performance criteria reflects MPN end strength only.

MAINTENANCE OF REAL PROPERTY

QUESTION: How much is budgeted in Maintenance of Real Property in FY 1986 to reduce the Backlog of Maintenance and Repair?

ANSWER: $17,750,000 is budgeted in FY 1986 to reduce the Backlog of Maintenance and Repair in the O&MNR appropriation.

QUESTION: What is the total program level to reduce the Backlog of Maintenance and Repair for FY 1984 through FY 1986?

ANSWER: The resources programmed to reduce the O&MNR Backlog of Maintenance and Repair (BMAR) over the FY 1984 to FY 1986 period are $55,522,000. However, it must be remembered that the BMAR number which associated funds are budgeted to reduce is not a static figure. As emergent requirements and other problems requiring unprogrammed repair arise, some of the funds budgeted from BMAR reduction must necessarily be diverted to resolve these unexpected requirements. As a result, these fiscal actions, which hopefully would lead to a reduction in BMAR, are partially offset by increases in the BMAR number associated with new finds, catastrophic failures and weather-related damage which cannot be planned or budgeted for.

RESERVE AUGMENTEES

QUESTION: Provide the number of reserve augmentees in FY 1984 through FY 1986.

GENERAL WENT: The Marine Corps Reserve Individual Mobilization Augmentee (IMA) program had 794 on board at the end of FY 1984 and is budgeted for 916 in FY 1985 and 1,041 in FY 1986. The following table provides a breakout between the various categories of augmentees:

IMA'S	FY 1984	FY 1985	FY 1986
Pay Group A- 48 Drills 15 Days ATD	557	608	659
Pay Group B- 24 Drills 15 Days ATD	203	266	329
Pay Group C- 12 Drills 15 Days ATD	27	32	37
Pay Group D- No Drills 15 Days ATD	7	10	16
TOTAL	794	916	1,041

AUTOMATED DATA PROCESSING

QUESTION: Your O&M budget includes $292 thousand in FY 1986 for ADP support. Provide a description of efforts funded in this line.

GENERAL WENT: The $292,000 in FY 1986 Automated Data Processing (ADP) support provides maintenance, training, and consumable supplies for the ADP-Fleet Marine Force (ADP-FMF) equipment located at units of the Selected Marine Corps Reserve (SMCR). Sixty-one ADP-FMF workstations are at units of the 4th Marine Division and 4th Force Service Support Group, and another 47 workstations are at units of the 4th Marine Aircraft Wing. This equipment provides essential automated support of manpower, supply, embarkation, financial, and pay systems for the SMCR. In addition, the ADP-FMF equipment is "ruggedized," providing the capability for deployment to the field during training or upon mobilization.

RETIRED PAY COSTS

QUESTION:
Breakout the costs associated with the effort to manage retired pay accrual between civilian personnel and support costs.

GENERAL WENT: The annual costs associated with management of the Marine Corps Reserve Retired Pay Accrual is estimated at $6,000 for civilian personnel and $100 for support costs.

EQUIPMENT SHORTFALLS

Question: Is the Marine Corps still experiencing any equipment shortfalls or deficiencies?

Answer: Yes. Listed below is the current and projected shortfall of major items of equipment by commodity area (in dollars) for fully equipping units of the Selected Marine Corps Reserve to wartime requirements. Compared with total wartime requirements, the FY1985 shortfall is 28.6%.

	FY1985	
Commodity Area	DOLLARS (MILLIONS)	% SHORT
Wpns and Trac Veh	$150.0M	25.6%
Comm/Elec	22.9M	15.2%
Support Vehicles	52.7M	41.7%
Engineer	53.2M	43.3%
TOTAL	$278.8M	

If funded, the Marine Corps' procurement program will eliminate all but 8.3% of that shortfall by the end of FY1988.

CIVILIAN PERSONNEL

QUESTION: Provide a breakout of the civilian personnel request, tracking from the FY 1985 Appropriated amount (civilian personnel $ only) to the FY 1985 Current Estimate and then to the FY 1986 Budget Request, highlighting the annualization of the FY 1985 3.5% pay raise, the FY 1986 5% pay reduction and any increase or decrease in civilian end strength/workyears in FY 1986.

GENERAL WENT:

Description	Workyears	End Strength	Dollars In Thousands
FY 1985 Appropriated	212	221	4,212
FY 1985 Pay raise	-	-	+200
Recosting based on latest available compensation data	-	-	-84
FY 1985 Current Estimate	212	221	4,328
Five percent pay reduction	-	-	-287
Seventeen additional personnel are required for administrative and disbursing support of the Marine Corps Reserve. Nine are administrative personnel assistants located at the Marine Corps Reserve Support Center and eight are pay clerks located at the Marine Corps Finance Center	+7	+17	+189
Sixteen personnel needed to improve Marine Corps input to the Reserve Component Common Personnel Data System (RCCPDS)	+8	+16	+163
Annualization of FY 1985 strength increase	+4	-	+62
Annualization of the FY 1985 pay raise	-	-	+42
Two additional personnel, a draftsman and a voucher examiner, are required for joint support of the 4th Marine Division and the 4th Marine Aircraft Wing	+1	+2	+20
FY 1986 Budget Request	232	256	4,517

MAJOR EQUIPMENT

QUESTION: Provide a list of major equipment to be fielded in the Reserves in FY 1985 and FY 1986, the quantity of those systems, and which quarter they are fielded. Also identify the O&M costs associated with fielding this equipment, breaking out civilian personnel support costs, spare part requirement amount, and depot maintenance and repair costs.

GENERAL WENT:

a. LOGISTICS VEHICLE SYSTEM (LVS). Deliveries of 4th Qtr FY85 LVS quantities have been adjusted to 1st Qtr FY86. Thus, no deliveries of the LVS to Reserve units are now scheduled during FY85. The delivery scheduled for FY86 is now as follows:

	FY86				
MAJOR END ITEM	1ST QTR	2ND QTR	3RD QTR	4TH Qtr	TOTAL
D0209 MK48, Front Power Unit	30	27	8	6	71
D0876 MK14, Container Hauler	14	13	0	0	27
D0877 MK15, Wrecker/Recovery	2	2	3	0	7
D0878 MK16, Fifth Wheel	2	4	5	3	21
D0879 MK17, Dropside Cargo w/Crane	10	8	0	3	21

O&M costs are derived at as follows:

Civilian Personnel Support	0
Spare Part Costs	$113,163
Depot Maintenance/Repairs	0

No civilian personnel support costs are anticipated for LVS. Contractually, 240 man-days are available for field support from the contractor using PMC monies. Spare parts cost were calculated using a four percent (.04) inflation index for FY86. No depot maintenance or repair costs have been provided since no depot repair is scheduled for the first ten years of vehicle life.

b. HIGH MOBILITY MULTIPURPOSE WHEELED VEHICLE (HMMWV). HMMWV fielding during FY85/FY86 for Reserve units are as follows:

D1001 Truck Ambulance, M997	0	0
D1002 Truck Ambulance, M1035	0	0
D1125 Truck, TOW, M1045	0	117 (4th Qtr)
D1158 Truck, Cargo, M1043	50 (2nd Qtr)	0
D1159 Truck, Armament, M1043	0	96 (4th Qtr)
D1180 Truck, Shelter, M1037	0	0

O&M cost are projected as follows:

Civilian Personnel	0
Spare Parts Costs	$121,598
Depot Maintenance Costs	0

No civilian personnel support costs are anticipated for the HMMWV. Any field support required is contractually available from the manufacturer at no cost to the Government.

No depot maintenance or repair costs have been provided since no depot repair is scheduled for the first seven years of vehicle life.

c. WEAPONS, OTHER

ITEM	FY-85 1	FY-85 2	FY-85 3	FY-85 4	FY-86 1	FY-86 2	FY-86 3	FY-86 4
M198 Howitzer	0	0	16	0	0	0	0	0
M249 SAW	0	0	0	200	200	212	0	0
MK-19 MOD 3MG	0	0	0	0	0	108	0	100
MK153 MOD 0 SMAW	0	0	0	0	50	100	48	0
9MM Pistol	0	0	0	0	0	0	0	5000
M16A2 Rifle	5000	0	2700	0	0	0	0	5000
TOW II	0	0	0	0	TBD	TBD	TBD	TBD
M60E3 7.62 MG	0	0	0	0	100	200	150	0

O&M costs are projected as follows:

Civilian Personnel	0
Spare Parts Cost	$80,000
Depot Maintenance	0

No civilian personnel costs are anticipated for any of the weapons systems. The spare parts costs are based on $5,000 per M198 Howitzer. Depot Maintenance will not be scheduled for the first five years of use. The O&M costs for weapons other than the M198 Howitzers will mirror present budgeted support costs.

DEPOT MAINTENANCE

QUESTION: Provide a list of equipment scheduled for depot maintenance by type of equipment, quantity, total and unit costs for FY 1984-1986.

GENERAL WENT:

Type of Equipment	FY	Quantity	Unit Cost (Dollars)	Total Cost (Dollars)
M101A1 Howitzer	84			
	85	1	28,644	28,644
M109A3 Howitzer 155MM	84			
	85	1	143,949	143,949
	86			
M114A2 Howitzer 155MM	84	2	21,053	42,106
	85			
	86	1	26,833	26,833
M60A1 Tank	84	3	170,732	512,196
	85	2	194,293	388,586
	86	1	186,511	186,511

Type of Equipment	FY	Quantity	(Dollars) Unit Cost	(Dollars) Total Cost
AN/USM-323 Generator	84	3	2,228	6,684
	85	4	2,633	10,532
	86	4	2,379	9,516
AS/USM-338 Oscilloscope	84			
	85	20	1,353	27,060
	86	2	1,302	2,604
PP-6836/G Power Supply Set	84	15	1,237	18,555
	85			
AN/PPS-15(V)2 Radar Set	84	6	5,302	31,812
	85	2	7,974	15,948
	86	1	7,974	7,974
AN/GRC-160 Radio Set	84			
	85	7	1,117	7,819
	86			
SB-22/PT Switchboard	84	5	880	4,400
	85	15	887	13,305
	86	3	880	2,323
Air Conditioner 18,000 BCU	84			
	85	20	3,894	77,880
	86	1	4,377	4,377
M12A1 Decontaminating Apparatus	84	3	14,821	44,463
	85			
	86			
PRS-8 Portable Mine Detecting Set	84	5	1,140	5,700
	85	1	911	911
	86			
A265 Floodlight Set	84	3	10,483	31,449
	85	5	10,497	52,485
	86	2	11,630	23,260
PU-742 Frequency Convertor	84	3	8,739	26,217
	85			
	86			
MEP-016A Generator Set	84	3	3,091	9,273
	85			
	86			
1910-1 Laundry Unit	84			
	85	5	29,805	149,025
	86			
MC-4000 Rough Terrain Forklift	84			
	85	1	30,844	30,844
	86			

			(Dollars)	
Type of Equipment	**FY**	**Quantity**	**Unit Cost**	**Total Cost**
M353 Trailer	84	20	3,403	68,060
	85	5	3,583	17,915
	86	8	4,664	37,312
M127A2C 12 Ton Semi-Trailer	84			
	85			
	86	1	11,975	11,975
4A032-11 Lubricating and Service Unit	84			
	85	2	14,453	28,906
	86	1	14,789	14,789
M118A1 6 Tom Semi-Trailer	84	4	10,165	40,660
	85	2	10,681	21,362
	86			
M750 Semi-Trailer Repair Parts Shop Van	84	3	18,946	56,838
	85			
	86			
M105A2 1 1/2 Ton Cargo Trailer	84			
	85	15	3,410	51,150
	86	4	3,564	14,256
M762 3/4 Ton Trailer	84			
	85			
	86	2	1,634	3,268
M149A1 400 Gallon Water Tank Trailer	84	83	3,737	11,211
	85			
	86	1	3,343	3,343
M151A2 1/4 Ton Utility Truck	84	15	11,582	173,730
	85	23	13,166	302,818
	86	11	13,313	146,443
M1A1 Infinity Collimator	84	2	1,082	2,164
	85			
	86			
M18 Gun Direction Computer	84			
	85	1	16,952	16,952
	86			
M2A2 Aiming Circle	84			
	85			
	86	1	1,368	1,368
M203 40MM Grenade Launcher	84	25	382	9,550
	85	9	397	3,573
	86			
M60 7.62MM Machine Gun	84	50	547	27,350
	85			
	86			

Type of Equipment	FY	Quantity	(Dollars) Unit Cost	(Dollars) Total Cost
M85 50 Caliber Machine Gun	84	4	4,070	16,280
	85	10	4,232	42,320
	86			
M29A1 81MM Mortar	84	15	2,925	43,875
	85			
	86			
AN/PVS-5A Night Vision Goggles	84	25	3,997	99,925
	85			
	86			
AN/PVS-2A Night Vision Sight	84			
	85	25	1,347	33,675
	86			
AN/UPA-60(V) Decoder	84			
	85			
	86	1	8,153	8,153
TA-937/GCC Telephone Line Equalizer	84			
	85			
	86	1	252	252
AN/PRM-33 Radio Test Set	84			
	85			
	86	5	658	3,290
AN/GCM-21 Teletypewriter Test Set	84			
	85			
	86	1	2,843	2,843
MEP-115A Generator Set	84			
	85			
	86	2	155	310
AN/USM-400 Signal Generator	84			
	85			
	86	1	12,920	12,920
AN/MRC-110 Radio Set	84			
	85			
	86	1	15,423	15,423
D7G Caterpillar Tractor	84			
	85			
	86	2	55,475	110,950
M416 1/4 Ton Trailer	84			
	85			
	86	4	1,563	6,252
M49A2C Fuel Tank Truck	84			
	85			
	86	1	38,967	38,967

			(Dollars)	
Type of Equipment	FY	Quantity	Unit Cost	Total Cost
M101A1 Cargo Trailer	84			
	85			
	86	1	2,869	2,869
M109A3 2 1/2 Ton Van	84			
	85			
	86	1	18,370	18,370
M543A2 5 Ton Wrecker	84			
	85			
	86	5	29,313	146,565
M88A1 Recovery Vehicle	84	1	209,009	209,009
	85			
	86	1	220,382	220,382
M16A1 5.56MM Rifle	84	250	102	25,500
	85	325	147	47,775
	86			
Secondary Depot Reparables	84			
	85			
	86			465,626
Other	84			68,906
	85			148,830
	86			230,818
Total Depot Maintenance	84			1,587,000
	85			1,665,000
	86			1,692,000

TRAVEL RATES

QUESTION: Travel rates for Air Force Reserve officers serving on extended active duty rise from $1,715 in FY 1985 to $2,406 in FY 1986, while rates for enlistees in the same category decline from $918 to $851. Please explain these rate changes.

ANSWER: Travel justified in the Administration and Support Section of the Reserve Personnel Appropriation Budget Estimates consists of a combination of transportation costs, shipment of household goods, and dislocation allowance for personnel and their dependents who will PCS during the fiscal year, and, travel costs for personnel who are disabled or hospitalized. The overall travel rate will fluctuate depending on the number and grade structure of the personnel who will PCS and the number of people disabled or hospitalized.

FY 1984 ACCESSIONS IN SKILLS

QUESTION: Even though the Air National Guard exceeded its FY 1984 and first quarter FY 1985 end strength objectives, the Committee understands that chronic skill shortages still exist. Please provide a breakdown of your FY 1984 accessions into skills which were already fully manned or overmanned.

ANSWER: Skill imbalances do exist in some functional areas. The impact, when spread throughout the 91 flying units, is minimized to some degree but even minor imbalances are unacceptable based on wartime tasking. C status and inspections are important measurement tools and point out areas of concern such as skill level manning within functional areas as well as overall strength shortages. ANG units strive to attain the highest possible level of readiness and emphasis at all levels of management is placed on not just passing inspections but on exceeding mission requirements. Minor imbalances or shortages have occurred at certain locations where demographics will not totally support the manpower requirement. However, our objective is to achieve 100% manning by functional area in order to fulfill the wartime tasking of the ANG.

FY 84 accessions into fully manned skills were into wartime critical specialties. The overmanning exists based on excessive length and difficulty of technical schools and high training elimination rates; career retention patterns; and future projected growth in these career fields.

MANNING SHORTFALLS

QUESTION: Please provide a listing of all officers and enlisted skill shortages. Other than monetary incentives, what steps are being taken to eliminate these manning shortfalls?

ANSWER: Some shortages exist in wartime mission essential and technical skills. Shortages in officer specialties exist in the professional engineering and medical officer areas. Enlisted skill shortages are in; operations (aircrew and command control systems), avionic systems, intelligence, weather, maintenance (aircraft, munitions, missile, and communications systems), audiovisual, civil engineering, and medical specialties.

To reduce these shortfalls, several enlistment policy changes were instituted to enhance recruitment and manning levels. Policies include conditional enlistments for individuals meeting all mandatory prerequisites except final medical clearance; flexibility for unit commanders to overman in critical wartime skills to offset technical school length and elimination rate and career field attrition rates; and where feasible, delegation of minor enlistment waiver provisions to state headquarters level.

For officers, policies include temporary federal recognition for nonprior service officers, conditional commissioning approval of senior year college students to enhance recruiting of engineering/high tech skills, precision recruiting targeted to fill shortage specialties, accelerated appointment processing of physicians and temporary appointments pending results of security clearance, enhanced retention efforts and increased focus on recruiting qualified officers voluntarily separating from active duty directly into the ANG.

For both officers and enlisted personnel, the flexibility exists for enlistment/appointment in advance of projected known losses, or projected manpower growth, to allow for lengthy technical school and on the job upgrade training; careful planning of weapons systems changes to avoid loss of skilled individuals in place when units convert to updated systems.

In addition, we have targeted our national and local recruiting advertising program to track with our critical shortages and have implemented a flexible advertising program that fulfills our requirements at any given time.

INCREASE IN FULL-TIME ACTIVE DUTY PERSONNEL

QUESTION: Provide an explanation of the increase in full-time active duty personnel and active guard and reserve personnel in FY 1986.

ANSWER: ANG AGR strength increases by 800 in FY86 to support aircraft conversions, new equipment and new missions being assigned to the ANG. Some examples are as follows:

Aircraft Maintenance/Conversions	334
Prime Ribs (Readiness in Base Services)	77
Intelligence Manpower to support CENTCOM plans	37
TAC Control unit equipment & reorganization	40
Gunnery Ranges	46
Replacement of active force technical advisors at ANG Weather Units	39

INCREASE IN CIVILIAN END STRENGTH

QUESTION: Provide an explanation of the increase in civilian end strength for FY 1986.

ANSWER: The Air National Guard civilian end strength increases in FY86 are military technicians to support addition of F-16 aircraft at a Tactical Fighter Training unit, and unit conversions from F-4 to F-15 and F-16, from O-2 to C-5 and from C-130 to C-141.

AIRCRAFT INVENTORY

QUESTION: Provide a list of aircraft inventory by type and quantity for FY 1984 through FY 1986.

ANSWER:

		# of A/C 84	# of A/C 85	# of A/C 86
ADTAC INTERCEPTOR				
	F-106	66	66	66
	F-4C	84	90	90
	F-4D	54	54	54
	TOTAL	204	210	210
SAC AIR REFUELING				
	KC-135A	16	3	3
	KC-135E	88	101	101
	TOTAL	104	104	104
TAC FIGHTERS				
	A-7	306	306	306
	A-10	96	96	96
	F-4C	150	138	84
	F-4D	164	170	152
	F-4E	-	18	66

		# of A/C 84	# of A/C 85	# of A/C 86
	F-15	-	-	18
	F-16A	24	24	48
	TOTAL	740	752	770
RECONNAISSANCE				
	RF-4C	114	132	132
	TOTAL	114	132	132
TACTICAL AIR SUPPORT				
	O2-A	18	--	--
	OA-37	66	66	54
	TOTAL	84	66	54
MAC SPECIAL OPERATIONS				
	EC-130E	8	8	8
	TOTAL	8	8	8
RESCUE & RECOVERY				
	HC-130H	4	4	4
	HC-130P	4	4	4
	HH-3E	12	12	12
	TOTAL	20	20	20
TACTICAL AIRLIFT				
	C-130A	48	48	40
	C-130B	48	48	48
	C-130D	8	--	--
	C-130E	32	32	28
	C-130H	32	36	44
	LC-130H	--	4	4
	TOTAL	168	168	164
STRATEGIC AIRLIFT				
	C-5A	--	3	3
	C-141	--	--	2
	TOTAL	--	3	5
	SUBTOTAL	1442	1463	1467
SUPPORT AIRCRAFT				
	C-7	1	--	--
	C-12F	--	--	6
	C-22A	--	4	4
	C-130A	--	1	2

	# of A/C 84	# of A/C 85	# of A/C 86
C-131B	6	6	6
C-131D	19	19	14
C-131E	5	4	3
T-33A	38	38	41
T-43A	4	4	4
CT-39A	4	4	4
TOTAL	77	80	84
GRAND TOTAL -	1519	1543	1551

DEPOT MAINTENANCE FOR ANG

QUESTION: Provide a list of aircraft and engines scheduled for depot maintenance by type of aircraft and engine, quantity, total and unit costs for FY 1984 through FY 1986.

ANSWER: Actual and programmed data is as follows:

AIRCRAFT
($ in 000's)

	FY 84			FY 85		
TYPE	QTY	TOTAL COST	UNIT COST	QTY	TOTAL COST	UNIT COST
A-7	73	$21,797	$299	72	$15,182	$211
A-10	16	3,350	209	37	9,313	252
KC-135	40	90,749	2,269	19	21,326	1,122
F-4C	76	48,340	636	69	56,781	823
F-4D	31	22,575	728	59	43,703	741
RF-4C	35	21,709	620	36	25,982	722
F-16	3	449	150	9	2,881	320
C-130	47	45,293	964	40	43,993	1,100
HH-3	3	673	224	8	115	14
F-106	25	9,145	366	35	10,429	298
A-37	28	774	28	28	642	23
C-131	4	56	14	8	90	11
T-33	3	74	25	18	586	33
T-39	0	0	0	1	471	471
C-22	0	0	0	4	6,000	1,500
F-4E	0	0	0	0	0	0

FY 86

TYPE	QTY	TOTAL COST	UNIT COST
A-7	73	$13,709	$188
A-10	36	9,484	263
KC-135	15	6,512	434
F-4C	48	38,129	794
F-4D	59	39,455	669
RF-4C	26	17,503	673
F-16	10	1,386	139
C-130	45	38,785	862
HH-3	10	$20	$2
F-106	16	2,084	130
A-37	4	139	35
C-131	1	1	1
T-33	35	997	28
T-39	1	6	6
C-22	0	0	0
F-4E	10	7,311	731

ENGINES

($ in 000's)

	FY 84			FY85		
TYPE	QTY	TOTAL COST	UNIT COST	QTY	TOTAL COST	UNIT COST
TF-41	40	$17,589	$440	54	$15,134	$280
J57-59W	0	0	0	4	200	50
TF33-P102	4	485	121	10	1,023	102
J79-15E	26	7,529	290	20	4,900	245
J79-15A	48	9,162	191	35	8,597	246
T58-5	3	138	46	3	213	71
TF-34-100	4	366	92	8	972	121
J85-17A	2	161	81	4	254	63
T56-7	52	4,393	84	55	3,571	65
T56-9	15	921	61	28	1,972	70
CT56-9	17	326	19	15	267	18
TT56-9	11	251	23	15	340	23
CT56-15	0	0	0	0	0	0
TT56-15	0	0	0	0	0	0
T56-15	4	329	82	6	522	87
G-56-15	70	2,082	30	77	2,449	32
G56-9	48	1,347	28	37	786	21
CT56-7	0	0	0	0	0	0
TT56-7	0	0	0	0	0	0
TF-39-1C	0	0	0	0	0	0
TGCP85-180L	0	0	0	1	16	16
T62T-16B	2	18	9	3	34	11
T62T-32	62	716	12	70	853	12
GTCP-36-50	0	0	0	3	66	22
J60-P3	1	65	65	1	77	77
GTC-85-70A	23	676	29	23	196	9
GTC85-71A	36	1,053	29	70	6	394
GTCP85-180	3	93	37	13	71	5
GTCP85-397	88	3,113	35	98	533	5
GTP70-15	19	619	33	0	0	0
R2000	0	0	0	1	62	62
GTCP85-106A	0	0	0	0	0	0
R2800	5	381	76	7	668	95
J33-35A	90	4,320	48	90	567	6
F100-200	0	0	0	7	1,415	202
J79-17G	0	0	0	0	0	0
F100-100	2	1,143	572	0	0	0
J79-17F	0	0	0	3	698	233

FY 86

TYPE	QTY	TOTAL COST	UNIT COST
TF-41	59	$15,510	$263
J57-59W	0	0	0
TF33-P102	17	1,828	108
J79-15E	20	4,519	226
J79-15A	35	8,016	229
T58-5	3	213	71
TF-34-100	8	972	121
J85-17A	11	698	63

FY 86

TYPE	QTY	TOTAL COST	UNIT COST
T56-7	48	3,854	80
T56-9	23	1,909	83
CT56-9	10	168	17
TT56-9	10	233	23
CT56-15	1	27	27
TT56-15	1	3	3
T56-15	6	524	87
G-56-15	82	2,730	33
G-56-9	43	1,187	28
CT56-7	10	282	28
TT56-7	10	120	12
TF-39-1C	1	1,150	1,150
TGCP85-180L	1	20	20
T62T-16B	4	46	12
T62T-32	70	854	12
GTCP-36-50	4	121	30
J60-P3	1	77	77
GTC-85-70A	25	276	11
GTC85-71A	48	374	8
GTCP85-180	13	156	12
GTCP85-397	103	689	7
GTP70-15	3	125	42
R2000	0	0	0
GTCP85-106A	2	68	34
R2800	20	1,910	96
J33-35A	90	593	7
F100-200	7	1,927	275
J79-17G	5	1,488	298
F100-100	6	1,825	304
J79-17F	4	3,259	815

ELEVEN ADDITIONAL RESERVE MILITARY END STRENGTH

QUESTION: Provide an explanation of the 11 additional reserve military end strength for other support.

ANSWER: The continued growth and/or expansion of the Air National Guard mission creates a requirement for additional ANG Statutory Tour Officer Advisors to the Office of the Secretary of Defense, Air Staff, Major Air Commands and other agencies. The specific requirements are:

Office of Secretary of Defense Reserve Affairs	5
(OASD) Reserve Forces Policy Board	1
Air Force Auditor General's Office	1
Air Force Intelligence Office	1
USAFE	2
PACAF	1

TRAINING SUPPORT FOR AIR NATIONAL GUARD

QUESTION: Provide a detailed description of the training programs for the Air National Guard. Also include the levels of funding for these programs for FY 1984 through FY 1986 and explanations of major increases and decreases.

ANSWER: The Air National Guard is supported by school training and special training programs.

The School Training Program is designed to increase mobilization potential and readiness of Air Guardsmen through training at Military Service Schools. This program provides training necessary to acquire initial military and/or military specialty skills. It includes commissioning and initial skill training for officers as well as for prior service enlisted personnel, and the retraining of officers and enlisted personnel into other military specialties. School programs also provide refresher and proficiency training necessary to attain and maintain the needed level of proficiency in the military specialty for which a member has been initially qualified. Unit conversions involving changes in the type of aircraft, type of unit, changes in unit mission or equipment are also supported under school training programs.

The levels of funding necessary to support school training programs for FY1984 through FY1986 are as follows:

FY1984	FY1985	FY1986
$37,343,000	$52,231,000	$59,039,000

Program increases from FY1984 to FY1985 have been necessary to support additional training days for newly rated flying officers upon their return to home units. Additional training has been required to support weapon systems modernization and increases in unit Primary Aircraft Authorizations (PAA). The implementation of new courses for air weapons controllers and ANG squadron/flight commanders has further increased program requirements. These increases have been partially offset by a reduction in the requirement to retrain personnel into other military specialties. Another decrease has been generated by reductions in class size due to construction at the ANG Professional Military Education Center which has restricted housing space.

School training program increases from FY1985 to FY1986 result from aircraft conversions to strategic airlift and increases in PAA in other weapons systems. Further increases are due to additional quotas for weapons controllers, aerial port and medical personnel along with course length increases in these and many other skill areas. These increases are partially offset by a reduction in undergraduate pilot training quotas.

The Special Training Program supports a variety of operational and training requirements including Air Defense and Strategic Air Command alerts, JCS Exercises, USAF Mission support, conversions and other special training necessary to improve combat proficiency or to increase mobilization readiness of Air National Guard Units.

The levels of funding necessary to support special training for FY1984 through FY1986 are as follows:

FY1984	FY1985	FY1986
$52,647,000	$73,194,000	$78,381,000

Major increases in the Special Training Program from FY1984 to FY1985 have resulted from rescheduling of operational readiness inspections, increased aeromedical evacuation training for flight nurses and additional proficiency training for Red Horse Squadrons. Further increases are required to support multiple versus single unit participation in various overseas tactical deployments. Prime Ribs participation in Joint Chiefs of Staff (JCS) directed exercises has increased to a point that a large percentage is provided by the Air National Guard. These increases have been partially offset by a decrease in proficiency and seasoning training which will be accomplished in a formal school status.

Major increases in the Special Training Program from FY1985 to FY1986 are due to additional combat communications and tactical air control participation in JCS directed exercises. Increases in ANG Rapid Deployment Force (RDF) involvement require more maintenance support for Bare Base Operations. Additional training support is required for maintenance, munitions, refueling, fire fighter and life support personnel at home station. An increase in instructor pilot support is necessary to support units with increases in PAA. These increases are partially offset by decreases in requirements for navigator training due to aircraft conversions.

DEPOT MAINTENANCE FOR AFR

QUESTION: Provide a list of aircraft and engines scheduled for depot maintenance by type of aircraft and engine, quantity, total and unit costs for FY 1984 through FY 1986.

ANSWER: The Air Force Reserve depot maintenance program is as follows:

Aircraft Maintenance

Fiscal Year 1984

AIRCRAFT	QUANTITY	AVERAGE UNIT COST	($000) TOTAL COST
A-10A	60	89,100	5,346.0
F-4D	69	303,724	20,957.0
F-105D	1	19,350	19.4
F-105F	1	19,350	19.4
F-16A/B	5	106,800	534.0
UC-123K	1	31,000	31.0
C-130A	37	490,108	18,134.0
C-130B	27	191,370	5,329.0
C-130E	29	240,345	6,970.0
C-130H	5	47,600	238.0
AC-130A	11	476,182	5,238.0
HC-130H/N/P	11	297,000	3,267.0
WC-130H	6	370,333	2,222.0
HH-1H	3	9,333	28.0
UH-1N	2	11,000	22.0
CH-3E	3	63,667	191.0
HH-3E	3	127,767	383.0
KC-135A	14	284,071	3,977.0
C-130 Wing Rehab	21	377,571	7,929.0
			80,835.0
	Fiscal Year 1985		
A-10A	74	91,080	6,740.0
F-4D	98	222,387	21,794.0
F-16A/B	20	238,050	4,761.0

AIRCRAFT	QUANTITY	AVERAGE UNIT COST	($000) TOTAL COST
UC-123K	1	33	33.0
KC-135A/E	17	274,353	4,664.0
AC-130A	14	413,071	5,783.0
C-130A	57	347,825	19,826.0
C-130B	34	157,794	5,365.0
C-130E	34	206,824	7,032.0
C-130H	6	137,833	827.0
HC-130H/N/P	9	417,888	3,761.0
WC-130H	10	273,300	2,733.0
HH-1H	4	7,500	30.0
UH-1N	4	10,500	42.0
CH-3E	8	107,750	862.0
HH-3E	8	54,500	436.0
C-5A	0	0	0.0
KC-135A to KC-135E	21	2,666,667	56,000.0
			140,689.0

Aircraft Maintenance
Fiscal Year 1986

AIRCRAFT	QUANTITY	AVERAGE UNIT COST	($000) TOTAL COST
A-10A	71	111,408	7,910.0
F-4D	104	211,788	22,026.0
F-16A/B	18	259,777	4,676.0
C-5A	3	455,666	1,367.0
UC-123K	1	47	47.0
KC-135A/E	18	295,277	5,315.0
AC-130A	14	414,214	5,799.0
C-130A	52	326,808	16,994.0
C-130B	30	213,500	6,405.0
C-130E	29	205,689	5,965.0
C-130H	6	97,166	583.0
HC-130H/N/P	15	357,200	5,358.0
WC-130H	10	372,300	3,723.0
HH-1H	7	32,714	229.0
UH-1N	6	18,000	108.0
CH-3E	4	164,750	659.0
HH-3E	8	145,500	1,164.0
C-141B	0		0.0
			88,328.0

Engines
Fiscal Year 1984

TYPE ENGINE	UNITS	($000) UNIT COST	($000) TOTAL
TF-34 (A-10)	5	127.9	639.5
T-56-9 (C-130A)	41	75.0	3,075.5
R-2800 (C-123)	2	42.6	85.2
T-56-A7 (C-130B/E)	31	87.6	2,715.6
T-56-15 (W/HC-130	16	82.4	1,318.4
T-400-400 (UH-1N/HH-1H)	1	28.8	28.8
G-400-400(HH-1N)	1	28.8	28.8
T-62T-16B (H-3)	3	8.7	26.1
G-56-9C/D (C-130)	48	26.1	1,252.8

TYPE ENGINE	UNITS	($000) UNIT COST	($000) TOTAL
G-56-15 (W/HC-130H/N/P)	49	24.7	1,210.3
GTC85-70A (KC-135A)	18	26.5	477.0
GTC85-71A (C-130)	44	18.8	827.8
GTP70-15 (KC-135A/C-130)	4	31.8	127.2
GTCP36-50 (A-10)	2	16.9	33.8
GTCP85-180 (GPU)	3	31.2	93.6
GTCP85-397 (GPU)	16	19.6	313.7
J-79-15 (F-4C/D)	28	138.2	3,869.6
J-57-59 (KC-135)	9	167.4	1,506.6
T-58-5 (H-3)	4	52.6	210.4
F-100-PW-200 (F-16A/B)	3	138.1	414.3
F-100-24A-FAN	5	18.6	93.0
F-100-24B-CORE	6	54.4	326.4
F-100-24C-LPT	3	14.3	42.9
F-100-24F-AUGM	2	35.1	70.2
F-100-24G-GEAR	3	3.9	11.8
F-100-24-HPT	6	22.3	133.8
			18,932.6

Engines
Fiscal Year 1985

TYPE ENGINE	UNITS	($000) UNIT COST	($000) TOTAL
TF-34 (A-10)	9	142.5	1,282.5
TF-39 (C-5A)			
T-56-9 (C-130A)	36	76.3	2,746.8
R-2800 (C-123)	2	42.6	85.2
T-56-A7 (C-130B/E)	37	88.8	3,285.1
T-56-15 (W/HC-130H/N)	21	83.4	1,751.4
T-400-400 (UH-1N/HH-1H)	1	34.6	34.6
G-400-400 (HH-1H)	2	34.6	69.2
T-62T-16B (H-3)	6	9.9	59.4
G-56-9C/D (C-130)	53	29.2	1,547.6
G-56-15 (W/HC-130)	56	26.8	1,500.8
GTC85-70A (KC-135A/C-130)	27	38.7	1,044.9
GTC85-71A (C-130)	45	35.4	1,593.0
GTCP36-50 (A-10)	10	18.7	187.0
GTP70-15 (KC-135)	4	32.2	128.8
GTCP85-180 (GPU M32-60)	3	34.9	104.7
GTCP85-397 (GPU M32)	15	21.7	325.5
J-79-15 (F-4C/D)	33	197.8	6,527.4
J-57-59 (KC-135)	17	182.3	3,099.1
T-58-5 (H-3)	4	54.7	218.8
F-100-PW-200 (F-16)	7	147.2	1,030.4
F-100-24A-FAN	5	21.5	107.5
F-100-24B-CORE	7	61.3	429.1
F-100-24C-LPT	4	16.5	66.0
F-100-24F-AUGM	7	41.2	288.4
F-100-24G-GEAR	3	4.3	12.9
F-100-24-HPT	7	25.7	179.9
			27,706.0

Engines
Fiscal Year 1986

TYPE ENGINE	UNITS	($000) UNIT COST	($000) TOTAL
TF-34 (A-10)	9	91.4	822.6
T-56-9 (C-130A)	36	80.3	3,533.2
R-2800 (C-123)	3	76.3	228.9

TYPE ENGINE	UNITS	($000) UNIT COST	($000) TOTAL
T-56-A7 (C-130B/E)	37	72.4	2,751.2
T-56-15 (W/HC-130H/N/P)	21	96.3	2,022.3
T-400-400 (UH-1N)	2	33.4	66.8
G-400-400 (HH-1H)	2	24.1	48.2
T-62T-16B (H-3)	6	9.0	54.0
G-56-9C/D (C-130)	53	19.8	1,128.6
G-56-15 (W/HC-130)	56	30.3	1,696.8
GTC85-70A (KC-135A/C-130)	26	29.9	777.4
GTC85-71A (C-130)	46	23.8	1,094.8
GTCP36-50 (A-10)	10	24.2	266.2
GTP70-15 (KC-135)	4	32.6	130.4
GTCP85-180 (GPU M32-60)	3	21.7	65.1
GTCP85-397 (GPU M32)	15	19.7	295.5
J-79-15 (F-4D)	37	213.5	7,899.5
J-57-59 (KC-135)	12	182.3	2,734.5
T-58-5 (H-3)	4	48.0	192.0
F-100-PW-200 (F-16)	3	148.9	744.5
F-100-24A-FAN	8	20.0	160.0
F-100-24B-CORE	8	31.8	254.4
F-100-24C-LPT	5	10.3	51.5
F-100-24F-AUGM	3	26.3	78.9
F-100-24G-GEAR	5	7.9	39.5
F-100-24-HPT	8	26.4	211.2
C-5A ENGINE			
TF-39	3	573.6	1,720.9
-Compressor Rotor	2	87.9	175.7
-Fan	2	9.4	18.8
-HPT	10	40.9	408.9
-LPT	6	7.2	43.3
-1st Stage Fan Stator	2	25.1	50.3
-Nozzle	7	35.7	250.0
-2nd Stage Fan Stator	2	12.6	25.3
-Turbine Mid-Frame	5	4.8	24.1
-GTCP 165-1	1	28.8	28.8
			30,094.0

EXCHANGEABLE ITEM REPAIR AND SUSTAINING ENGINEERING

QUESTION: Provide an explanation of the increases in the FY 1986 request for Exchangeable Item Repair and Sustaining Engineering.

ANSWER: The increase of $737,000.00 in Exchangeable Item Repair is directly attributable to our first full year of operation of the C-5A aircraft at Kelly AFB, Texas. As you are aware, the C-5A aircraft is a complex sophisticated aircraft with numerous systems and subsystems (exchangeables). We expect the amount of Exchangeable Items to increase as our fleet of C-5A aircraft increases. The increase of $463,000.00 in Sustaining Engineering is identified as follows: $163,000.00 for price growth; aproximately $200,000.00 for Sustaining Engineering on the C-5A aircraft, and the balance of $100,000.00 for Sustaining Engineering on our F-4 fleet.

KC-10 SAC ASSOCIATE PROGRAM

QUESTION: Provide a description of the KC-10 SAC Associate program, including the funding level from FY 1984 to FY 1986 and justification for any increases and decreases.

ANSWER: The KC-10 SAC Associate program consists of Air Force Reserve crews flying SAC-owned aircraft to maintain aircrew proficiency training. As a by-product of training, Reserve crews provide aerial refueling support for other DoD aircraft. The Air Force Reserve supplies 50% of the aircrews and beginning in FY 1986 will provide a portion of the maintenance personnel required upon mobilization to generate wartime surge capability. KC-10 funding supports personnel costs and fuel requirements generated by training flying hours. FY 1984 to FY 1986 O&M costs and justification are as follows: ($000)

FY 84	FY 85	FY 86
$11,413	$15,056	$31,831

The change in FY 1985 is associated with the gain of additional KC-10 aircraft at two existing locations, generating a requirement for an increase in aircrew personnel and flying hours. FY 1986 increases to support the activation of a new KC-10 unit the first quarter of FY 1986.

C-5 STRATEGIC AIRLIFT PROGRAM

QUESTION: Provide a description of the C-5 Strategic Airlift program, including the funding level from FY 1984 to FY 1986 and justification for any increases and decreases.

ANSWER: The C-5 Strategic Airlift program differs from the C-5 MAC Associate program in that the C-5 aircraft are owned and maintained by the Air Force Reserve and all costs associated with the program are the responsibility of the Reserve. In the C-5 MAC Associate program, Air Force Reserve crews fly MAC-owned aircraft for flying training proficiency while providing 50% of the aircrews and 40% of the maintenance personnel.

Following are FY 1984 to FY 1986 O&M costs for the C-5 Strategic Airlift program: ($000)

FY 84	FY 85	FY 86
$ -0-	$3,530	$25,967

The FY 1985 increase is for the first Air Force Reserve C-5 equipped unit being activated the fourth quarter of FY 1985. Costs are for personnel, depot maintenance, fuel and supplies to operate the aircraft for one-fourth of a year. The requirements in FY 1986 are associated with the Air Force Reserve owning and operating five C-5 equipped aircraft for a full fiscal year.

C-141 STRATEGIC AIRLIFT AND MAC ASSOCIATE PROGRAMS

QUESTION: Provide a description of the C-141 Strategic Airlift and MAC Associate programs, including the funding level from FY 1984 to FY 1986 and justification for increases and decreases.

ANSWER: The C-141 MAC Associate program consists of Air Force Reserve crews flying MAC-owned aircraft to maintain flying proficiency and to crew revenue-producing ASIF Missions. The Air Force Reserve provides 50% of the aircrews and 40% of the maintenance personnel for these aircraft. The C-141 Strategic Airlift program is new beginning in FY 1986 and differs in that the aircraft and all personnel are owned 100% by the Air Force Reserve. Costs associated with the MAC Associate program are mainly personnel costs for the crews and maintenance people and reimbursement to MAC for training flying hours. However, all costs to fly and maintain a C-141 equipped unit are borne by the Air Force Reserve.

Following are O&M funding levels and justification for both C-141 programs: ($000)

	FY 84	FY 85	FY 86
C-141 Strategic Airlift	$ -0-	$ -0-	$ 2,123
C-141 MAC Associate	91,461	102,530	98,977

C-141 Strategic Airlift increase in FY 1986 is for the first Air Force Reserve equipped C-141 unit that is activating the fourth quarter of FY 1986. The MAC Associate change from FY 1984 to FY 1985 is caused by an increase in the number of training flying hours and the decrease in FY 1986 is attributed to the transfer of MAC Associate C-141 aircraft to the Air Force Reserve.

COMMAND SUPPORT

QUESTION: Provide an explanation of the 15 additional reserve military end strength for command support.

ANSWER: The increase of 15 reserve military end strength displayed in the command support budget activity is in error. Our current FY 1985 estimated strength and the FY 1986 requested strength for command support should be identical and in agreement with that appropriated by Congress in the FY 1985 Budget.

WARTIME MEDICAL PERSONNEL

QUESTION: Provide an explanation for the increase of $641 thousand for additional wartime medical personnel for FY 1986. What is the total amount of the program and the total number of personnel for FY 1984 through FY 1986.

ANSWER: The increase of $641 thousand in program growth is primarily related to the activation of a new medical service unit during FY 1985. FY 1986 costs are attributed to the addition of 18 civilian workyears for this new unit ($443 thousand) and medical supplies and equipment requirements for existing medical service units and aeromedical evacuation squadrons. These increases in program growth are offset by price reductions in Stock Fund purchases and the computation of a proposed 5% pay reduction in FY 1986 resulting in a net FY 1985 to FY 1986 change of $448 thousand. Following are the number of personnel and Operation and Maintenance funding levels for FY 1984 through FY 1986.

	FY 84	FY 85	FY 86
Personnel	117	163	170
O&M Funding ($000)	$4,185	$6,118	$6,566

INDIVIDUAL MOBILIZATION AUGMENTEES

QUESTION: Provide the total number of individual mobilization augmentees for FY 1984 through FY 1986.

ANSWER: The total number (end strength) of Individual Mobilization Augmentees for FY 1984 through FY 1986 are as follows: FY 1984 - 11,633, FY 1985 - 11,973, and FY 1986 - 11,899.

TRAINING SUPPORT FOR AFR

QUESTION: Provide a detailed description of the training programs for the Air Force Reserve. Also included the levels of funding for these programs for FY 1984 through FY 1986 and explanations of major increases and decreases.

ANSWER: The primary mission of the Air Force Reserve is to train, maintain and provide operationally ready units and trained individuals needed in time of war or national emergency. This involves many considerations such as assuring the proficiency of each reservist and unit, the adequacy of equipment and training, and the use of all available resources. Since our mission is training, it can be said that all resources included in our budget request are for training programs and purposes. In the O&M budget of the Air Force Reserve there are no funds specifically identified to provide training programs for Reservists.

AIRCRAFT INVENTORY

QUESTION: Provide a list of aircraft inventory by type and quantity for FY 1984 through FY 1986.

ANSWER: The primary aircraft inventory programmed for the Air Force Reserve is as follows:

TMS	FY 1984	FY 1985	FY 1986
A-10A	90	90	90
C-5A	0	5	5
UC-123K	3	3	3
AC-130A	10	10	10
C-130A	56	56	56
C-130B	32	32	32
C-130E	40	40	40
C-130H	6	6	8
HC-130H	10	8	4
HC-130N	4	4	4
HC-130P	0	2	6
WC-130H	7	7	7
KC-135A	24	21	21
KC-135E	0	3	3
C-141B	0	0	2
F-16A/B	18	24	24
F-4D	102	102	102
CH-3E	6	6	2
HH-3E	8	8	12
HH-1H	5	5	5
UH-1N	5	5	5

QUESTIONS SUBMITTED BY SENATOR ANDREWS

T-39 FAKER ROLE

QUESTION: In a letter responding to my inquiries about the T-39, Secretary Weinberger wrote and I quote: "The Air Force has previously investigated using retiring T-39s in several alternative missions, including the Faker role, and determined it was impractical to continue operating the aircraft." Would you please provide the Subcommittee with copies of any report or memo resulting from this study?

ANSWER: Several potential uses for retiring CT-39/T-39 aircraft have been evaluated. In each case, cost of modifications along with the high cost of operation and support made use of the CT-39s impractical. The attached message goes through such an analysis.

ROUTINE ZYUW RUVMAAA6419 3131017
R 072359Z NOV 83
FM DIR MAT MGT MCCLELLAN AFB CA//MMSG//
TO RUEAHQA/HQ USAF WASH DC//LEYY//
INFO RUVAFLC/AFLC LOC WPAFB OH//ATW/TGWA-3//
RUCUEKA/HQ SAC OFFUTT AFB NE//XPHV//

UNCLAS SECTION 1 OF 2
HQ SAC/XPHV PASS TO MAJ FRANTA
SUBJ: CT-39 ALTERNATIVE MISSION COST PROJECTION
REF: A. YOUR 261850Z OCT 83, CT-39 ALTERNATIVE MISSIONS (NOT TO HQ SAC/XPHV).
B. YOUR 121715Z JUL 83, REPLACEMENT OF T-39 AIRCRAFT (NOT TO AFLC LOC/ATW/TGWA-3 AND HQ SAC/XPHV).

1. REF A REQUESTS COST ANALYSIS TO MAINTAIN 25 CT/T-39 AIRCRAFT. THE DOLLAR FIGURES PROVIDE COST ESTIMATE(S) FOR A SINGLE AIRCRAFT, PROJECTION FOR 25 AIRCRAFT, AND A COMPARISON TO THE CONTRACTED COST OF MAINTAINING THE NEW OPERATIONAL SUPPORT AIRCRAFT (OSA). THE CT/T-39 ANNUAL DOLLAR ESTIMATE IS BASED ON FIVE YEAR RECURRING CYCLE, AND IS FOR REFERENCE ONLY.

/	CT/T-39	
/	1 EA	25 EA
/ MODIFICATION DLM	$ 91,300	$ 2,282,500
/ MAINTENANCE DLM	132,800	3,320,000
/ W/LABOR & MATERIAL	605,900	15,147,500
/ TOTAL	$830,000	$20,750,000

NOTE: PROJECTIONS ARE FOR ONE YEAR, APPLICABLE TO ALL CT/T-39 AIRCRAFT KEPT IN INVENTORY REGARDLESS OF TOTAL AIRFRAME FLYING HOURS.

/	NEW OSA ACFT BEECH C-12F		GATES LEARJET C-21A	
/	1 EA	25 EA	1 EA	25 EA
/ ANNUAL LEASE	$212,052	$5,301,300	$207,300	$5,182,500
/ ANNUAL MAINTENANCE CLS	202,944	5,523,600	231,180	5,779,500
/ TOTAL	$432,996	$10,824,900	$438,480	$10,962,000

NOTE: NO INFLATION FACTOR INCORPORATED IN CT/T-39 COST PROJECTION BUT BUILT INTO NEW OSA CONTRACT.

2. THE DECISION TO PHASE-OUT THE CT/T-39 PROMPTED MANAGEMENT CHANGES AT ALL LEVELS OF LOGISTICS SUPPORT TO THE PHASE-DOWN OF THE WEAPON SYSTEM. AN AREA OF CRITICAL CONCERN IS FUNDING. ANY ADDITIONAL AIRCRAFT RETAINED IN THE FLEET OVER THE 16 AIRCRAFT THUS FAR PROJECTED, WILL IMPACT THE SUPPORT CAPABILITIES OF THE T-39 ADVERSELY. DIRECTION FROM SM-ALC MRRB AND THE FY83 G079 REVIEW PROVIDED BASIS FOR WITHHOLDING FUNDING ALLOCATIONS ON THE T-39, AND SUBSEQUENT REALLOCATION TO SUPPORT THE NEW OSA PROGRAM. SIMILAR ACTION WAS TAKEN AT OTHER SUPPORT ALC'S. ALL PLANNING AND SUPPORT WAS DIRECTED AT MAINTAINING A RESIDUAL FLEET OF 16 AIRCRAFT AND ANY INCREASE IN RESIDUAL FLEET SIZE IS NOT SUPPORTABLE. EMPHASIS MUST BE PLACED ON THE FACT THERE ARE NO FUNDS ALLOCATED AT PRESENT FOR FY84 MAINTENANCE OR MODIFICATION OF THE

T-39 AIRCRAFT, EXCEPT $432,000 IS AVAILABLE TO COMPLETE THE STROBE LIGHT MODIFICATION, T.O. 1T-39-914 ON 20 RESIDUAL AIRCRAFT (ONCE DETERMINED) AND $1 MILLION FOR T.O. 00-25-107, AREA REQUEST FOR ASSISTANCE. THIS DOES NOT EQUATE TO FLEET SUPPORT.

3. IF THE USING COMMANDS WERE ABLE TO PROVIDE CERTAIN O&M FUNDS,

THE BIGGER PROBLEM OF NONAVAILABILITY OF MODIFICATION MONIES FOR THE T-39 WOULD REMAIN. IF A LARGE RESIDUAL FLEET WERE RETAINED, THE NECESSARY MODIFICATIONS AND RELATED COST WOULD BE EXORBITANT. AS A MINIMUM TO KEEP THE CT/T-39 AIRCRAFT FUNCTIONAL, THE FOLLOWING DEC 1981 SM-ALC/ROCKWELL CORP STAFF STUDY OF REQUIRED WORK/MODIFICATIONS IS PROVIDED:

/ LOWER WING SKIN REPLACEMENT
/ VHF RADIO INSTALLATION
/ ILS CAPABILITY
/ COMPASS SYSTEM
/ CORROSION TREATMENT/ACI
/ AIRCRAFT STRUCTURAL INTEGRITY PROGRAM
/ WING CENTER RIB REWORK/MOD
/ INBOARD/OUTBOARD WING SPAR REPLACEMENT

4. NOT PROJECTED ARE IMPROVED EFFICIENCY FACTORS OF NEW OSA, COST OF ENG UPGRADE, AVIONICS UPGRADE AND PARTIAL/COMPLETE ELECTRICAL REWIRE THAT WILL MOST CERTAINLY HAVE TO BE ADDRESSED IN THE NEAR FUTURE. THERE HAVE BEEN NO CHANGES IN THE PROGRAM AUTHORITY TO REFLECT NEW PHASEDOWN. REQUIREMENTS. REQUIREMENT FOR ENTIRE FLEET REMAINS INTACT IN PA, BUT NOT CONSIDERED FOR THE REASONS WHICH FOLLOWS:

/ FUNDING AND ITEM MANAGEMENT AREAS HAVE HAD THEIR PERSONNEL PLACE A HOLD ON PURCHASING/ACQUISITION AND MODIFICATION UNTIL THE REVISED PA HAS BEEN ISSUED. REF B STATED THE PHASE DOWN OF CT-39 PROVIDED BASIS FOR REQUESTING FUNDS TO BE EXPENDED JUDICIOUSLY TO SUPPORT THE CT/T-39 DURING PHASE DOWN AND HAS BEEN TAKEN GENERALLY TO MEAN: STOP BUYING, CANCEL (IN PROCESS) PURCHASE REQUEST, AND RETURN FUNDS ALLOCATED. THE REQUEST FOR JUDICIAL SPENDING IS VALID; HOWEVER, WHAT HAS OCCURRED SUBSEQUENTLY WILL MAKE IT DIFFICULT TO SUPPORT 16 TO 20 AIRCRAFT MUCH LESS AN INCREASED QUANTITY OF RETAINED T-39S. VALUABLE TIME HAS BEEN LOST AND EFFECTIVE SUPPORT OF THE T-39 IS DIMINISHING RAPIDLY. AT THE PRESENT TIME, WE ARE LOOKING AT A TWO YEAR LEAD TIME TO RESTORE OUR SUPPORT CAPABILITY. TWELVE TO 18 MONTHS FROM NOW, THE IMPACT TO SPARES ACQUISITION AND FUNDS CURTAILMENT WILL HAVE SIGNIFICANT MICAP CONDITIONS OCCURING WITH MORE SEVERE IMPACT IF LARGER QUANTITIES OF RESIDUAL AIRCRAFT BECOME A FACT.

6. DUE TO DETERIORATION OF THE FLEET, THE POSSIBILITY EXISTS THAT A LARGE PORTION OF THE FLEET DESIGNATED TO BE RETAINED, REGARDLESS OF QUANTITY, WILL BE GROUNDED PRIOR TO NECESSARY WORK IMPLEMENTATION. IF THE AIR FORCE WANTS TO KEEP THE T-39 ON ACTIVE INVENTORY WITHOUT HIGH NMCS AND MICAP RATES, THEN IMMEDIATE DECISIONS HAVE GOT TO BE MADE TO PREVENT OR MINIMIZE EXCESSIVE GROUNDING OF AIRCRAFT.

7. ONE OF THE MAJOR AREAS OF REWORK REQUIREMENT IS THE WING. $62 MILLION (1982 DOLLARS) FOR WING REWORK (WHICH IS REQUIRED) WAS CANCELLED ON THE GROUNDS THAT THE T-39S WOULD PHASE OUT. IT WAS ENVISIONED THAT THE RESIDUAL FLEET OF 16 AIRCRAFT COULD BE MAINTAINED BY HAVING USABLE WINGS TO DRAW ON FROM STORAGE AIRCRAFT AT DAVIS-MONTHAN. DUE TO THE WORST CONDITION AIRCRAFT BEING GROUNDED FIRST, THE INITIAL AIRCRAFT WON'T PROVIDE THE NECESSARY WING REPLACEMENTS FOR AT LEAST A YEAR. IF ADDITIONAL T-39S ARE KEPT, THEN THERE WILL BE NO WING SALVAGE CAPABILITY BECAUSE THOSE AIRCRAFT WITH GOOD WINGS WILL BE THE ONES KEPT ACTIVE. IF THE ADDITIONAL COST OF WING REWORK IS CONSIDERED, THEN COST TO RESIDUAL FLEET GOES EVEN HIGHER ($862,750 PER AIRCRAFT).

8. THE SIX "B" MODEL AFSC AICRAFT MUST HAVE A LIFE EXTENSION MODIFICATION INSTALLED PRIOR TO THEIR REACHING 10,000 FLIGHT HOURS. AN ENGINEERING CHANGE PROPOSAL (ECP) IS NOW BEING DEVELOPED AND WILL BE AVAILABLE BY 31 DEC 83. THIS IS BY SM-ALC/MMSR ENGINEERING DIRECTION. THESE ARE SPECIAL USE/EQUIPPED AIRCRAFT, AND THE HIGH COST OF REUORK PLUS EXTENDED TIME LOSS IN MAINTENANCE COULD SEVERELY LIMIT THE COMMAND'S FUNCTIONAL CAPABILITY, AND THE COMMAND ALTERNATIVE MIGHT BE TO CONSIDER TAKING ANOTHER T-39 IN BETTER CONDITION
BT

ROUTINE ZYUW RUVMAAA6420 3131017
R 072359Z NOV 83
FM DIR MAT MGT MCCLELLAN AFB CA//MMSG//
TO RUEAHQA/HQ USAF WASH DC//LEYY//
INFO RUVAFLC/AFLC LOC WPAFB OH//ATW/TGWA-3//
RUCUEKA/HQ SAC OFFUTT AFB NE//XPHV//

UNCLAS FINAL SECTION OF 2
AND INVESTIGATING THE POSSIBILITY OF TRANSFERRING CAPABILITY/EQUIPMENT FROM THE "B" MODEL TO AN "A" MODEL.

9. IN SUMMATION. LEAD TIME TO ACQUIRE A ROUTINE, COMPETITIVE CONTRACT FROM THE INITIATION OF THE PURCHASE REQUEST FOR MANUFACTURE, REPAIR OR ACQUISITION OF PARTS IS 18 TO 24 MONTHS FOR AIRCRAFT ITEMS, ESPECIALLY OLDER AIRCRAFT SUCH AS THE T-39. WE WILL BE HARD PRESSED TO EVEN SUPPORT A BASIC FLEET OF 16 AIRCRAFT. INCREASING THE SIZE OF THE RESIDUAL FLEET IS UNREALISTIC UNLESS POSITIVE MEASURES ARE IMMEDIATELY TAKEN. IN OCTOBER OF THIS YEAR, SIX CT/T-39S WERE REMOVED FROM ACTIVE INVENTORY DUE TO BEING UNECONOMICAL TO REPAIR. TWO MORE AIRCRAFT HAVE SINCE BEEN GROUNDED AND FALL IN THE SAME CATEGORY. SIX ADDITIONAL T-39S MAY BE GROUNDED BY EARLY JAN 84. FATIGUE, CORROSION AND AGE IS TAKING ITS TOLL.

10. REQUUET YOU KEEP THE PROGRAM MANAGER AT SM-ALC INORMED OF AY DECISIONS AFFECTING T-39S. DIRECT RESPONSES TO MR SHANNO ZUBEE OR MAJ BRIAN HOPE, SM-ALC/MMSG, SYSTEM PROGRAM MANAGERS/AUTOVON 633-4402
BT

T-39 FAKER ROLE

QUESTION: Has the Guard performed any analysis on the T-39 fleet and, if so, what are the results?

ANSWER: The National Guard Bureau has not conducted an analysis of the T-39 fleet.

QUESTION: Do you know whether the Air Force has examined each T-39 to determine if there is useful life in any of them for the Air Defense mission role? If so, please provide by tail number the condition of each aircraft examined.

ANSWER: The Air Force has an intensive inspection program for the T-39 aircraft. Generally, extensive corrosion damage has been found throughout the wing, fuselage and engine pylons. Corrosion treatment and replacement of corrosion-induced cracked structural components could not be avoided if these aircraft were to be continued beyond their programmed service life. Although the Air Force has validated the requirement for an airborne threat ECM simulator, the Statement of Operational Need(SON) specifying the detailed characteristics of the aircraft to perform this mission has not been finalized. A detailed cost analysis of aircraft which meet mission requirements will be conducted when the SON is validated. Preliminary indications are that the T-39 may not provide adequate capabilities to meet mission needs. Accordingly, development of tail number listings of T-39s suitable for this mission would be premature at this time.

QUESTION: Where will the funds come from since Congress is now seriously discussing freezing the FY86 budget at last year's levels? Would you agree that transferring the T-39 on a one for one basis would be cost-effective and not require the Air Force to buy additional aircraft?

ANSWER: The requirement for an aircraft to perform the Faker air defense role will compete for funding against all other requirements in the Air Force program. If purchase of a new aircraft to meet this requirement is determined to be the proper course of action, the earliest it could probably be included would be the FY88 budget. Under a leasing concept, however, this could be accomplished in somewhat less time. Actual priority in the program and eventual cost will determine extent of additional funding requirements to support this program. Air Force examination of the transfer of T-39s for this mission indicates it is not a cost effective course of action and that the T-39 may not meet all mission requirements when the Statement of Need(SON) is finalized and validated.

QUESTION: Assuming that the Statement of Need is validated, when is the earliest possible date the replacement aircraft can be budgeted for?

ANSWER: If it is decided to purchase a new aircraft for this mission, then the earliest time it could be included in the budget would probably be FY88. If it is decided to lease an aircraft to perform the mission, then it could be accomplished in somewhat less time.

QUESTION: In the meantime and assuming there are some useful T-39 aircraft for this mission, would it not make sense to transfer T-39 aircraft to the Guard to enhance their mission capabilities now, thereby delaying a need to procure new aircraft and save the taxpayer money?

ANSWER: The Air Force is continuing to define the follow-on Faker aircraft through its formal requirements determination process. Until that process is completed it would be premature to decide whether or not the transfer of T-39 aircraft to the Guard would be in the taxpayer's best interests. Preliminary indications are that the T-39 may not provide adequate capabilities to meet mission needs.

QUESTION: Since the T-39 is a much better aircraft for Air National Guard Air Defense training, why not pick the best T-39s and retire the much older T-33?

ANSWER: While on the surface the T-39 may appear to offer attractive fuel economies, cost of necessary modifications to perform this role and to keep the aircraft in a safe flyable condition combine to make the the T-39 less attractive than it might first appear. It should also be noted that while the T-39 is a few years younger than the T-33, the average flying hour age of the T-39 is more than double that of the T-33. In any case, the Air Force is in the process of formally defining the aircraft requirements to perform the Faker air defense mission. Until these requirements are finalized and validated, it would be premature to prejudge the issue.

F-16 MODIFICATION

QUESTION: In testimony before this subcommittee on Tuesday of this week the Acting Secretary for Research and Development had in his opening statement a paragraph on the Preplanned Production Improvement. He mentioned and I quote: "There is potential for

significant savings when we can extend the life cycle of a system which might otherwise be curtailed."

I support this concept but I am concerned about the Air National Guard and the apparent weight given to modify the F-16 with a night time all-weather radar missile for air defense.

-- It is true that right now the F-16 does not have a night or all-weather missile capability?

-- Is it true that the F-16 was not designed for this capability and is having problems being equipped with the AMRAAM missile.

ANSWER: F-16s in the field today do not have a radar missile capability. However, the F-16 C/D has been designed to incorporate the AMRAAM missile, and we anticipate that starting in February 1987, production aircraft will be delivered with AMRAAM capability. The 304 F-16 C/Ds delivered prior to that date will require a software update only to give them the same capability.

Of the earlier F-16 A/B aircraft, 456 Block 15 aircraft had structural and some wiring provisions incorporated in production to facilitate retrofit of AMRAAM capability. This retrofit is currently planned as part of the F-16 Operational Capability Upgrade (OCU) Program which adds computer memory, radar changes and software required to employ AMRAAM. The even earlier 329 Block 10 F-16 A/B aircraft also could be modified to carry a radar missile, but the FY 86 President's Budget includes no program to modify these aircraft.

There are no major technical problems associated with integration of AMRAAM in the F-16 aircraft. Actual capability in operational units will be determined by availability of missiles.

F-4 FIGHTER

QUESTION: Can you tell this subcommittee why there is a need to give the F-16 a nighttime all-weather missile capability, when, looking at this from the Guard's perspective, we already have this capability in the F-4 fighter? If your intent is to find savings by extending the life cycle of a system otherwise curtailed, why is the subcommittee not seeing initiatives, for example, to give the F-4 a look-down radar capability?

ANSWER: An all weather missile capability for the F-16 is critical for several reasons. First of all the F-16 is scheduled in the near future to replace the aging F-106 which is currently flown by 4 Air Defense Air National Guard units. Additionally the F-16 has a worldwide air superiority mission. An all environment missile for the F-16 is an essential requirement for both mission areas. The F-4 is currently programmed for replacement by the F-16 in the outyears, consequently the Air Force has assigned a relatively low priority to F-4 modification programs commensurate with the anticipated short "pay back" period. Continued reduction in fighter procurement which could delay F-4 unit conversions may warrant reprioritization of aircraft modification programs throughout the fighter force structure.

F-4s VS F-16s

QUESTION: If the Air Guard has dependable F-4s, designed for air defense, already equipped with a nighttime all-weather radar missile (the AIM-7), the potential for a missile like AMRAAM if the bugs get worked out, and airframe life projections will out into the year 2000. It strikes me that we are seeing delays and problems in equipping the F-16 with a nighttime all-weather radar missile for air defense when in front of us we have the perfect candidate in the F-4. Explain why the F-4 would not be a more capable and more cost-effective candidate than the F-16 to upgrade for the Air Guard's air defense role in the 1980's?

ANSWER: The F-16 represents an improved interceptor over the unmodified F-4 in the area of range, radar coverage, ECCM, and sortie production. A modified F-4 with a new state-of-the-art radar, fire control system and improved missiles would be a significant improvement over the current F-4 capability, but would represent a relatively large investment compared to the anticipated useful life of the airframe.

QUESTION FOR THE RESERVES

QUESTION: There have been claims made recently that military missions are being moved to the reserves without providing them with the funding required to procure the needed equipment. My understanding is that funds are ultimately provided but not immediately after the decision is made. Now, it's foreseeable that these funds can be put in when there is a window of opportunity in the budget process to do so. (Such opportunities would include budget reviews, midyear reviews, and reprogrammings.) My concern is that these chances for the Services to re-arrange their assets is not being taken, in the case of reserve requirements. Is this the case?

ANSWER: It is not the intent of the Department of Defense to move missions to the Reserve Components without providing the resources to carry out the mission. However, within the bounds of fiscal reality and the Department's policy of "first to fight, first to equip" much of the newer and more modern equipment will of necessity be assigned to the Active components. Nevertheless, more new and modern equipment is being placed in the Reserve Components than ever before (e.g. M-1 tanks and Bradley Fighting Vehicles; AH-64, UH-60, SH-2F, F-16, F-15, F/A-18, KC-130T, C-141, C-5, and C-12 aircraft; FFG-7 Frigates, and MCM and MSH Minesweepers). The FY 1985 Appropriation Act provided $5.8 billion for Reserve Component new equipment procurement and the FY 1986 budget requests $4.0 billion. In addition, approximately $4.5 billion in modern major equipment items are being redistributed to the Reserve Components from the Active components in both fiscal years 1985 and 1986.

The program and budget process does provide an opportunity for the rearrangement of assets to meet the most critical needs, whether active or reserve. Both the Department and the Services make use of this opportunity throughout the process. For example, during the FY 1986 program review, funding was rearranged within the Department of the Air Force program to provide for mission enhancing modifications to Air Reserve Force fighter aircraft. During the FY 1986 budget review, a funding redistribution from the active force account to the reserve force account was made within the Department of the Navy to support the implementation of modernization kits for Naval Reserve F-14 aircraft.

The historical phenomenon of neglect of the Reserve Components is not present in today's concept of the Total Force.

F-20 TIGERSHARK

QUESTION: In the past few weeks, I have been contacted by various Air National Guard groups asking for my support in providing the F-20 Tigershark for their role in Air Defense. Although there is not any funding in the FY 1986 Budget for the F-20, would you support the F-20 over the F-16C in the future if funds were to be made available?

ANSWER: With the overall goal of modernization, F-20 procurement would be supported with the provision that no other aircraft procurement programs are jeopardized.

F-20 IN THE GUARD's FY 1987 BUDGET

QUESTION: Do you foresee any plans for including the F-20 in the Guard's FY 1987 budget?

ANSWER: Introduction of the F-20 into the total force inventory will receive consideration in the FY 1987 budget as we continue to review our fighter requirements and procurement strategy.

CORPORATE INNOVATION

QUESTION: To my recollection the F-20 operates at approximately 40 percent of the F-16C flying hour cost and requires less than half the maintenance personnel required by the F-16C (refer to attached). I understand that in this time of extreme budget constraints we are limited in our spending but I also do not think we should punish a company for the corporate innovation demonstrated in this aircraft. Do you agree with this statement? What do you think we could do in the future to promote such productivity within corporations which are willing to provide the initial research and development outlays?

ANSWER: Let me say up front that every contractor who thinks he has a good idea that we can use can submit a proposal to us. We have a formal procedure to evaluate them. Our decision to accept or reject the proposal is keyed to how well the proposal meets our needs and if we have funding authorized and appropriated for it. The C-5B is a good example where our current program resulted from an unsolicited proposal.

We also encourage innovation within our acquisition process where, during the early concept evaluation phase of a weapon acquisition we have several contractors studying our requirements and independently developing concepts to meet them. We also use, where feasible, prototypes and flyoffs to test innovative concepts. The F-16 program evolved out of such an acquisition strategy.

In the more basic science and manufacturing productivity areas, we have programs designed to stimulate and take advantage of contractor innovation. We provide contractor funds for Independent Research and Development (IR&D). The actual level of IR&D funding depends upon the contractor's business base. The only string attached is that the funds must be spent on research related to defense technology. We also have the MANTECH and TECHMOD programs to encourage contractors, on selected high payoff areas, to develop or modernize production techniques and capabilities.

The bottom line, however, is that every program we pursue must fulfill our needs.

DECLINING READINESS OF RESERVE COMPONENT UNITS

QUESTION: The most recent Annual Report of the DoD Reserve Forces Policy Board (14 November 1984) states that, at the end of 1983, 49% of reporting Reserve component units were combat-ready, a decline of 7% from the level reported a year earlier.

The Report states that much of the decline in readiness is due to the infusion of modern equipment into the Reserve components. It also states that the two most critical factors limiting Reserve component readiness are a lack of equipment on hand and deficiencies in individual skill qualifications.

Please update us on the current state of Reserve component unit readiness. Has the decline in readiness been reversed?

ANSWER: The data to which you refer is from the JCS Unit Status Report (UNITREP) System. UNITREP data is designed to report a unit's status in the measured areas of equipment, personnel, and training at a given point in time. UNITREP data is valuable in assessing a unit's current status but it is of limited value in developing trend data since requirements in the reported areas vary from one reporting period to another. Analysis of recent UNITREP data, in terms of the percent of units reported to be in a combat ready status, shows a generally steady trend from the 1983 period.

QUESTION: What is being done about the two critical limiting factors -- lack of equipment and skill qualifications? Are there any initiatives in the 1986 budget to address these factors.

ANSWER: The Guard and Reserve Equipment Report, submitted annually to Congress as part of the DoD Force Readiness Report, clearly indicates that the Reserve components are receiving more, newer, and better equipment than ever before. In addition to major items of equipment, a similar situation exists in the area of training aids, devices, and simulators. The incidence of Guard and Reserve participation in major exercises, in this country and overseas, continues to increase and funding for initial and higher level skill training also continues to receive emphasis. Support for this year's budget will ensure that the flow of dollars for Guard and Reserve equipment and training support will not be interrupted.

FULL-TIME MANNING

QUESTION: In 1986, you propose to add $440 million to increase full-time manning end strength by 19,600 (page 15). This proposal increases full-time manning from 54,697 in 1985 to 74,282 in 1986, an increase of 62%, while Selected Reserve end strength increases by only 4.4%.

Please explain the need for this increase.

What problems can you identify than justify this expenditure?

In your statement (page 18), you indicate that the greatest challenge facing the Guard and Reserve Forces is procuring equipment to modernize the Guard and Reserve. Why not use some of the $440 million to meet this equipment shortfall?

ANSWER: The indicated $440 million is not totally in support of the requested 19,600 full-time support increase for FY 1986. Approximately $386.5 million is in direct support of that increase, with the remaining $53.5 million associated with the annualization and payraise costs of the prior year strength increase.

No attempt should be made to equate a linear relationship between increases in full-time support strength with increases to total Selected Reserve manning. In addition to increases to meet the training needs of a growing drilling reserve population, full-time manning is also a function of the stability, continuity, and expertise required to accommodate the additional day-to-day peacetime missions, sophisticated weapon systems, and technologically complex aircraft, ships, and tracked vehicles being assigned to the reserve components. For example; 4,300 of the requested 35 percent increase is in support of the Naval Reserve to include the manning of existing FF-1052 and FFG-7 class frigates as well as additional ships to be transferred to the Reserve during FY 1986. Increased full-time support is also required at Shorebased Intermediate Maintenance Activities which provide not only essential maintenance support to the frigates but also provide the shore structure for the sea/shore personnel rotation. Additional full-time support is required for recruiting support and to support the transition to more technologically complex aircraft, e.g. F/A-18, F-14, and A-7E. Almost 1,000 of the indicated increase is merely the transfer of the Naval Reserve recruiting effort from the active component personnel account to the reserve personnel account and is, therefore, not growth in Total Force strength. The growth of almost 350 full-time personnel for the Marine Corps Reserve provides similar support for additional aircraft being assigned to the Reserve Component, e.g. KC-130T aircraft at Stewart Field, N.Y., and transitions to other more complex aircraft, e.g. AH-1T and F-4S. The Air National Guard increase of 800 is also, for the most part, direct unit support. This includes maintenance support for new aircraft acquisitions and transitions, e.g. F-16, F-15, F-4E, C-141, and C-5 aircraft. The Army's requested increase of approximately 14,000 for its reserve components is primarily based on its priority effort to increase the level of full-time support in its deployable company size units to meet prescribed readiness criteria. A limited sample test conducted by the Army in deployable units, provides support to the assertion that an increased level of full-time support does improve overall unit readiness.

Procuring new equipment without the associated full-time manpower to provide training and maintenance does not measurably improve readiness. While the procurement of equipment does remain a major challenge and one that is being met head-on, it is the experienced full-time personnel that translate new and sophisticated equipment along with trained personnel into ready units able to perform their wartime tasking.

RESERVE COMPONENT SHARE OF DEFENSE BUDGET

QUESTION: Secretary Webb, in your statement, you say (page 1): "We have recognized that conditions dictate that the Guard and Reserve should accept a larger role in this country's day-to-day defense. Reserve component missions and force structure consequently are being modified to reflect this expanded role".

Given the recognition of the expanding role of the Reserve and the Guard, one would expect that a reasonable share of the budget would be allocated to Reserve Components. However, the FY 1986 Defense budget seems to reflect different priorities:

- -- The total DoD budget increases by 10%, but the total Reserve Component budget increase is 0%.
- — In procurement (which is a major problem area for the Reserve Component), the total DoD budget increases by

10.3%, while the Reserve Component procurement budget declines by 31%. The Reserve Component receives 6% of the 1985 DoD procurement budget, but only 3.7% of the 1986 procurement budget.

Please explain this inconsistency. Are the Reserve Component budget requirements being properly presented in the DoD budget process?

ANSWER: From a personnel strength aspect, the FY 1986 budget requests funding for a Selected Reserve strength growth of 4.3 percent over FY 1985 in support of the expanded role of the Reserve Components. The requested increase in personnel strength for the Active Force over this same period is approximately one percent.

While the total DoD budget does reflect a 10 percent increase in TOA, the apparent zero increase for the Reserve Components is misleading and does not correctly portray the Department's intentions or program for resourcing the Guard and Reserve. The FY 1985 Appropriation Act provided approximately $1.2 billion for additional Reserve Component procurement which, when added to the funding request for FY 1985 tends to mask the Department's intended growth in TOA for FY 1986. Without the inclusion of the $1.2 billion of additional funding for FY 1985, the total FY 1986 budget request for the Reserve Components reflects a TOA increase of 5.3 percent over the FY 1985 request.

In the specific case of Reserve Component procurement funding, the $1.2 billion add-on in FY 1985 also causes a substantially different funding profile between FY 1985 and FY 1986 than that indicated by Department planning. It is recognized that even without the added Congressional funding in FY 1985, a decrease in new procurement funding, albeit much smaller, is still depicted between the two fiscal years. However, for the most part this decrease is attributable to current program buyouts completed in FY 1985 (e.g., Marine Corps Reserve Light Armored Vehicles and Naval Reserve C-9 aircraft) and a single year procurement hiatus in FY 1986 (e.g., Army National Guard AH-64 helicopters). The larger increase reflected in FY 1986 for total DoD procurement is, of course, primarily the result of increases in the higher cost weapon systems of the strategic arena that do not impact on the Reserve Components.

Realizing the constraint imposed by fiscal reality, assessment of whether or not recognition of the expanding role of the Guard and Reserve is being reflected by budgetary priorities should also consider that viable Reserve Component equipment must and is being acquired from sources other than new procurement. During fiscal years 1985 and 1986, approximately $4.5 billion in modern major equipment items will be redistributed each year from the Active Components to the Reserve Components. This redistribution of equipment is not reflected in figures indicating the percentages of procurement TOA going to the Reserve Components. Items included in this valid source of modern equipment for the Guard and Reserve are: F-15, F-16, F/A-18, F-14, SH-2F, C-5, and C-141 aircraft; FFG-7 Guided Missile Frigates; Chapparrel Air Defense Systems; M-60A3 tanks; and CUCV trucks.

Within the bounds set by fiscal constraint, it is believed that the Reserve Component budget requirements are being properly presented in the budget process.

GUARD AND RESERVE

QUESTION: Do you have an estimate of the equipment shortfalls for the Army Guard and the dollar cost of fulfilling the current inventory plan for the Army Guard? Do you have the same data for the Air National Guard?

ANSWER: Specific shortages of selected items of equipment are identified in Annex II of the Fiscal Year 1986 Force Readiness Report, the National Guard and Reserve Equipment Report. The analysis of this data reveals a current shortfall of 30% of required equipment for the Army National Guard. Although this data is based on selected line items of equipment, the specific items were selected to be a representative sample of the entire inventory. The Department of Defense Budget for Fiscal Year 1986, as reflected in the Procurement Program (P-1R) of 4 February 1985, identifies $7.3 billion for FY 84-87 procurement of such equipment, comprising the current inventory plan. The combination of new procurement distribution, with the redistribution of existing equipment from the Active to Reserve Forces, is projected to reduce the 30% shortage to approximately 19% by the end of Fiscal Year 1988, according to data in the Annex.

New equipment procurement planned for FY 1984 to FY 1987 ($3.8 billion) plus planned equipment redistribution will cover additional requirements and reduce the shortfall to 1% by the end of FY 1988 for the Air National Guard.

It must also be noted that the stated requirements for the Army National Guard and Air National Guard increased, relative to last year, by over 39% and 21% respectively. It is anticipated that stated requirements will continue to grow with the current increased emphasis on Guard and Reserve forces. Therefore, this funding represents only that which is needed to fill presently identified requirements, and may be insufficient for requirements yet to be identified.

C-17s VS C-5s

QUESTION: General Gill: Would you rather have C-17's in the reserves or C-5s?

ANSWER: The C-17 and C-5 are both very capable aircraft and welcome additions to the Air Force Reserve. The Reserve will begin operating C-5 aircraft in the unit-equipped role this summer at Kelly AFB, TX. These aircraft, along with the C-5 aircraft programmed for Westover AFB, MA., will be used to convert and modernize units now operating older C-130 aircraft. The Reserve is also programmed to operate the C-17 aircraft when it becomes operational in 1992. The C-17 is the key to the Total Force airlift shortfall problem. The Air Force Reserve as well as the active Air Force need the C-17 to modernize their strategic and tactical airlift force structure.

AH-64 HELICOPTER COMPANIES

QUESTION: Have you selected the two helicopter companies to receive the AH-64 Apache helicopter during FY-87 and, if so, would you tell us where they are located?

ANSWER: The actual distribution of equipment to units of the Guard and Reserve is determined and carried out by the Service staffs in conjunction with the respective Chief of the Guard or Reserve component, not by OSD. The Army has indicated that the AH-64 Apache helicopters will be assigned to units of the North Carolina National Guard in FY-87.

JT3D ENGINES

QUESTION: General Gill: I understand that the provision of JT3D engines for the C-135 fleet has worked out extremely well. I know it has helped our unit in Milwaukee. These engines save money, are quieter, and have enhanced the unit's ability to carry out its mission. Do you agree with this assessment?

ANSWER: Yes. The three KC-135As that the Air Force Reserve has modified have demonstrated excellent reliability and performance. The KC-135E aircraft are an unmitigated success with aircrews and maintenance personnel alike. We are looking forward to the day that our entire Reserve fleet will be converted to KC-135E.

F-20 AIRCRAFT FOR THE AIR NATIONAL GUARD

QUESTION: If the Congress could find some money to purchase F-20 aircraft for the Air National Guard with the understanding that no important other program be cancelled, then would you support that decision?

ANSWER: With the overall goal of modernization, F-20 procurement would be supported with the provision that no other aircraft procurement programs are jeopardized.

Questions Submitted by Senator Ernest F. Hollings

QUESTION: What are the FY 84 end of year personnel strength levels and the projected FY 85 levels for each of the Reserve and Guard components of the Selected Reserve?

ANSWER: The Selected Reserve strength levels requested are reflected in the table below:

	FY 1984 (Actual)	FY 1985 (Projected)
ARNG	434,259	438,382
USAR	275,062	285,646
USNR	120,558	128,700
USMCR	40,619	41,757
ANG	105,012	107,690
USAFR	70,318	74,829
DoD Total	1,045,828	1,077,005
USCGR	12,327	12,500
Total Selected Reserve	1,058,155	1,089,505

QUESTION: What are the wartime mobilization levels for each of these components?

ANSWER: The wartime mobilization requirements for FY 1986 for each of the components at M day are reflected in the table below:

	FY 1986
ARNG	473,700
USAR	329,500
USNR	141,700
USMCR	42,500

	FY 1986
ANG	113,600
USAFR	82,900
DoD Total	1,183,900
USCGR	26,900
Total	1,210,800

QUESTION: Provide similar data to that requested in questions 1 and 2 above for the Individual Ready Reserve.

ANSWER: (1) The Individual Ready Reserve strength levels for FY 1984 and FY 1985 are reflected in the table below:

	FY 1984 (Actual)	FY 1985 Projected
ARNG	9,500*	9,300*
USAR	276,700	289,900
USNR	69,000	68,300
USMCR	48,400	50,000
ANG	-	-
USAFR	41,000	40,600
DoD Total	444,600	458,100
USCGR	5,500	5,500
Total IRR	459,100	463,600

* Inactive National Guard

(2) The IRR is one of several pretrained manpower pools that are available to meet the shortfall between peacetime active and reserve component strengths and wartime total force requirements. Ideally, the IRR should be of sufficient strength to meet the remaining wartime manpower shortfall, after considering any other available pretrained manpower, during the period before sufficient wartime draftees and volunteers can be processed and trained. Many initiatives are underway within the DoD and with the support of the Congress to increase these projected inventories. For example, the increase in the MSO from 6 to 8 years in 1984 will add an estimated 150,000 members to the IRR by FY 1990.

QUESTION: What procedures will be used to eliminate personnel shortfalls between current strengths in the Selected and Individual Reserve components and wartime mobilization personnel requirements? How many days after a war breaks out will the Selected and Individual Reserves be up to mobilization manning requirements?

ANSWER: (1) There are many individual initiatives now underway in DoD to assure manning of the Selected Reserve to 90% by FY 1990 and to increase the pool of trained personnel in the Individual Ready Reserve. Specific actions are being taken to control attrition, improve overall retention and to increase new accessions even in an increasingly difficult recruiting environment. Additional recruiting resources are being programmed, both for advertising and for recruiters in the field. The new GI educational assistance program will help as well as increased bonuses for both the Selected Reserve and IRR.

With these initiatives and continued congressional support, it is believed that the strength goals will be met this year and in FY 1986. The Coast Guard Reserve program and budget are not within DoD purview. The DoD must, therefore, defer to the Department of Transportation regarding plans to close the Coast Guard Reserve's shortfalls in personnel to meet its wartime mobilization levels.

(2) Upon mobilization, the Selected Reserve becomes part of the total active force, and the IRR serves as a primary source of pretrained manpower to bring that force to full mobilization manning requirements. These requirements are not met until the shortfall between the total force structure and the available pretrained manpower is eliminated. Nearly 99 percent of the Selected Reserve and over 70 percent of the IRR will have been mobilized by M+90, however all services combined will still experience an aggregate shortfall of 131,000 in pretrained manpower.

Questions Submitted by Senator Robert C. Byrd

DOD PRESENCE IN WEST VIRGINIA

QUESTION: Mr. Webb, I have just recently received an appointment as a member of the Defense Appropriations Subcommittee. I am very pleased to add the Defense Subcommittee to my Appropriations Committee Assignments.

I know how important our National Defense is to West Virginia— that is why I asked to serve on this Subcommittee.

Mr. Webb, Generals Walker, Temple, Conaway, Berkman, Gill, Went, Admiral Kempf, I want all of you to be aware, if you are not so already, that West Virginia has a record of participation and sacrifice in World War II, Korea, and Viet Nam that may well be unmatched by any other state. Now we in West Virginia find ourselves burdened with extraordinarily high unemployment. This is a priority concern with me, and I expect to be working closely with you in the Reserve Components, as well as the Service Secretaries, to see what can be done to increase the Defense Department's presence in the State of West Virginia with a view to helping to alleviate the unemployment problem. I would like to be assured that I will have the full cooperation of all of the Reserve Components in this endeavor.

Mr. Webb, do you or any of your colleagues have any suggestions or recommendations for increasing the Department's presence in West Virginia that you would like to submit for the record? I would like to see some thoughtful recommendations formulated for the record. You may wish to consult with the several Service Secretaries in your answer.

Land Use Master Development Plan, West Virginia

Mr. Webb, General Conaway, on February 24, 1984 in my office, I discussed the matter of a "Land Use Master Development Plan" for the Air National Guard base facilities at Charleston and

Martinsburg, West Virginia, with General Chambers, who at that time was General Conaway's deputy.

Subsequently, on March 23, 1984, at a joint Appropriations/Armed Services Committee hearing, I questioned General Chambers about this matter, and he indicated his support for the formulation of such a plan. I also discussed the possibility of additional C-130 aircraft at each of the West Virginia sites and the propects of more modern aircraft such as the C-130H, for the West Virginia bases.

Senate Report 98-500, accompanying the Omnibus Defense Authorization Act, 1985, dated May 31, 1984, included language, incorporated at my request, indicating that the Armed Services Committee strongly supports the "Land Use Master Development Plan" for the Air National Guard bases at Charleston and Martinsburg, West Virginia, as "...the best way to accelerate the full utilization, development, and expansion of these bases, including the receipt of additional aircraft, should they become available."

Senate Report 98-567, accompanying the Military Construction Appropriation Bill, 1985, dated July 26, 1984, also included language, at my request, endorsing the "Land Use Master Development Plan" for the Air National Guard bases at Charleston and Martinsburg, West Virginia.

Since then, I have been notified by the Air Force and the Air National Guard that (1) the 130th Tactical Airlift Group at Charleston is scheduled to convert their C-130E models to the newer C-130H models in July 1986; (2) the 167th Tactical Airlift Group at Martinsburg will be expanded from 8 to 12 C-130B aircraft beginning in October 1986, with the associated increase of 29 full-time positions and 68 military drill authorizations and several millions of dollars in new construction; and (3) both the Charleston and Martinsburg locations are undergoing a "Comprehensive Land Use and Development Master Plan" which was placed under contract in September 1984 with an architectural review scheduled in April 1985 and a completion date in late 1985 or early 1986.

I ask that the latest communication in this regard from General Conaway be published in the record at this point.

7 FEB 1985

Honorable Robert C. Byrd
United States Senate
Washington D.C. 20510

Dear Senator Byrd

As follow-up to your meeting with Gen Chambers in Feb 1984, and after your testimony in March before the Joint Armed Services Committee giving support to the Air National Guard, I wish to take this opportunity to update you on action initiated which affects our West Virginia units.

The initial actions involving West Virginia Air Guard unit equippage changes are well underway. The 130 Tactical Airlift Group at Charleston is scheduled to convert their C-130E models to the newer C-130Hs in July 1986. Additionally, I would like to take this opportunity to confirm the buildup of the 167 Tactical Airlift Group from 8 to 12 C-130B aircraft beginning in October 1986. This will result in an increase of 29 fulltime employees and 68 military drill authorizations. Your strong interest in these two superb units has helped immeasurably in making this a reality.

Both Charleston and Martinsburg locations are undergoing a Comprehensive Land Use and Development Master Plan which was contracted in September 1984. The architectural review is scheduled in April 1985 and engineering development will continue throughout the year.

I am pleased that the President's FY86 Budget provides funding of a fire suppression system ($1.4 Million) for Charleston facilities. Likewise, at Martinsburg a fire suppression system ($.8M) and parking apron ($1.9M) to resolve an existing shortage are also included in the FY86 budget. To support the increased number of C-130s at Martinsburg, $3.3M in construction for apron and jet fuel system will be incorporated into the conversion program.

Your continued support of the Air National Guard is appreciated.

Sincerely

John B. Conaway

JOHN B. CONAWAY
Major General, USAF
Director, Air National Guard

ANSWER: It is our understanding that the Army National Guard is exploring, with the Adjutant General of West Virginia, the expansion of the training capabilities at Camp Dawson. Several projects for Camp Dawson were identified previously.

The Army Reserve has previously identified construction projects needed in West Virginia including the expansion of the Army

Reserve Center in Ripley, West Virginia which was added to the FY 85 authorization bill, but not appropriated. The project is 35 percent designed, and is planned for award this fiscal year with savings accumulated from timely execution of programed projects.

Actions involving the West Virginia Air National Guard in both Charleston and Martinsburg are well underway. The President's FY 86 Budget provides funding for a fire suppression system at both Charleston ($1.4M) and Martinsburg ($.8M). In addition, funding is being requested for construction of a parking apron and jet fuel system at Martinsburg ($5.2M).

The 130 Tactical Airlift Group at Charleston is scheduled to convert their C-130E models to the newer C-130Hs in July 1986. Also, the 167 Tactical Airlift Group will increase from 8 to 12 C-130B aircraft beginning in October 1986. This will result in an increase of 29 full time employees and 68 military drill authorizations.

C-130s IN WEST VIRGINIA

QUESTION: General Conaway would you please give me an updated schedule, including significant milestone events, leading to full realization of the following:

a. the conversion of C-130E aircraft at Charleston to the new C-130 H models;

b. the expansion of the C-130 B aircraft at Martinsburg from eight to twelve;

and c. the land use master development plan for the Charleston and Martinsburg Air National Guard bases.

ANSWER:

a. The following are the major milestones for the conversion of the 130 Tactical Airlift Group, at Charleston, West Virginia from 8C-130E to 8C-130H aircraft.

(1) Preconversion conference completed Mar 18-20, 85.

(2) Publish programming plan; May 1, 85, which details training, supply, equipment, and construction action.

(3) Aircraft arrive Jul 86 thru Oct 86.

b. The following are the major milestones for the 167 Tactical Airlift Group robusting from 8 to 12 C-130B aircraft.

(1) Preconversion conference completed Mar 20-22, 85.

(2) Publish programming plan May 15, 85which details training, supply, equipment, manpower and construction action.

(3) Aircraft arrive Oct 86 - Dec 86.

c. The following significant milestone events in the Master Development Planning for the Air National Guard bases at Charleston and Martinsburg, West Virginia remain:

(1) Preliminary concepts submitted to NGB for review, April 1985.

(2) Final concepts submitted to NGB for review, July 1985.

(3) Completion of Comprehensive Land Development Studies, Feb 1986.

RIPLEY, WEST VIRGINIA — ARMY RESERVE CENTER

QUESTION: Last year, I secured language in the reports accompanying the Fiscal Year 1985 Military Construction authorization and appropriation bills in support of $1.3 million for the U.S. Army Reserve Center at Ripley, West Virginia. What is the status of the design and construction of this project? Would you please provide for the record an updated schedule, including significant milestone events, leading to the completion of this project?

ANSWER: The project for the expansion of the Ripley Army Reserve Center is still under design. The 35 percent drawings were approved on 5 March 1985, and the project should be essentially designed by 1 June 1985. Although authorized in the FY 1985 Military Construction Authorization Act, funds were not appropriated for the expansion of the Ripley Army Reserve Center. It is, therefore, necessary to request the Appropriations Committees' approval to construct the project by reprogramming available FY 1985 savings. This should occur in July after our review of the design. Upon approval of the Appropriations Committees, we will advise the Corps of Engineers to advertise the project, and the contract award should occur in either late September or early October of this year.

FIVE-YEAR CONSTRUCTION PLAN

QUESTION: Mr. Webb, what construction projects are contemplated in the latest Guard and Reserve five-year plans for West Virginia?

ANSWER: The Services have provided the following information. The West Virginia National Guard has identified the following Army Guard construction needs programmed through fiscal year 1990.

Fiscal Year	Location	Project
88	Camp Dawson	Barracks Building
88	Camp Dawson	Barracks Building
88	Camp Dawson	Dining Facility
88	Kingwood	Armory Addition
89	Camp Dawson	Barracks Building
89	Camp Dawson	Dining Facility
90	Camp Dawson	Barracks Addition
90	Camp Dawson	Dispensary

Also, an Aviation Support Facility is planned at Huntington, but it has not been assigned to a specific program year.

The following Army Reserve projects are planned in West Virginia during the FY 1987-1991 timeframe:

Fiscal Year	Location	Project
89	New Martinsville	Expand 25-100 Member USARC/OMS
90	Parkersburg	Expand 25-100 Member USARC/OMS
91	Rainelle	New 200 Member USARC/OMS
91	Kingwood	New 100 Member USARC/OMS

There are no projects in the Naval Reserve five-year plan for West Virginia.

The Air National Guard five-year plan contains seven projects in West Virginia which are tentatively being considered for programming in future years. These are subject to further reviews and, therefore, may change. They have not yet been put in a fiscal year.

Location	Project
Charleston	Aircraft Holding Pad
Martinsburg	Composite Avionics Non-Destructive Inspection Facility
Martinsburg	Short Field Runway
Martinsburg	Add/Alter Operational Training Complex
Martinsburg	Alter Hangar 110
Martinsburg	Add/Alter Jet Fuel Storage
Martinsburg	Add to Aircraft Parking Apron

The Air Force Reserve five-year plan contains no construction projects for West Virginia.

It must be emphasized that the information provided above is derived from various planning sources. It does not guarantee that specific construction projects will be included in future DoD budgets.

QUESTION: Which, if any, of these projects could be accelerated into fiscal year 1986?
ANSWER: There is no project currently at a design state which will allow execution in FY 1986.

QUESTION: What more can be done to modernize West Virginia Guard and Reserve facilities?
ANSWER: While many of the facilities in West Virginia are at a satisfactory level of modernization due to recent Military Construction projects, both the Army National Guard and Air National Guard are conducting inquiries into their future West Virginia requirements. The Army National Guard is working along these lines with the Adjutant General for West Virginia. Areas being explored include modernization of armories and maintenance support facilities, and expansion of the training capabilities at Camp Dawson. In accordance with the Committee's direction, the Air National Guard has initiated a Comprehensive Land Use Master Development Plan for its West Virginia bases.

QUESTION: What is the latest status of the construction of the new combined Armed Forces Reserve Center in Charleston, West Virginia, which was subject to disruption due to the default of the original contractor?
ANSWER: A completion agreement between the Corps of Engineers and the bonding company was signed on 25 January 1985. The bonding company has a contract with Constructors, Inc. of Fayetteville, TN. A preconstruction meeting was held on 5 February 1985, and the contractor moved on-site 12 March 1985. Construction is approximately five percent complete at this time.

QUESTION: What is being done to assure that all pertinent government laws and regulations are being monitored to ensure full compliance by the new contractor? Please provide a report on that matter for the record. You may wish to consult with General Heiberg on your answer.
ANSWER: A full-time resident inspector is present on-site and will remain there until completion of work. Additionally, normal Corps of Engineer reviews of contractor's payrolls, shop drawings, materials used, and quality of work are in progress and will continue for the full term of contract.

QUESTION: How soon can the facilities in Huntington, West Virginia, be repaired or modernized?
ANSWER: A contract was recently awarded to replace the roof in the Army Reserve Center. Following that work, installation of new ceilings and interior painting will take place. If sufficient funds are available this fiscal year, the exterior fence will be repaired as well as some minor exterior masonry work. A kitchen renovation is planned in the next several years. For the Naval Reserve Center, it is planned to execute a Whole Center Repair (renovation) in Fiscal Year 1986.

KEEP FULLY INFORMED

QUESTION: Mr. Webb, I trust that you and your colleagues will keep me personally informed on all matters relating to the Department of Defense Reserve Components in West Virginia. May I have your assurances on that?

ANSWER: We will try our best to keep the Senator informed of any significant Guard and Reserve activities in West Virginia.

QUESTIONS SUBMITTED BY SENATOR DENNIS DECONCINI

THE MAC AIRLIFT SQUADRON

QUESTION: General Conaway, your unit at Andrews AFB supports the MAC airlift squadron flying VIPs, does it not?

ANSWER: Yes. Our unit at Andrews AFB supports VIP travel. This is done in conjunction with team travel support by our unit. Team travel and VIP support are scheduled through Headquarters Military Airlift Command.

TYPE OF AIRCRAFT

QUESTION: What type of aircraft are you presently using for this mission?

ANSWER: The Military Airlift Command (MAC) team travel support provided by the DC Air National Guard unit at Andrews is currently performed using two passenger configured T-43A aircraft. The team travel mission was originally performed with four T-43A's at Andrews, but Air Training Command needs for the aircraft required two to be deconfigured and returned to operational navigator training configuration in 1981. The unit is also equipped with four CT-39A aircraft for support of MAC and National Guard Bureau operational support airlift missions.

T-39 REPLACEMENT

QUESTION: Are you scheduled for replacement aircraft as part of the Air Force wide T-39 replacement program which is being implemented through a leasing arrangement with Gates Learjet Corporation?

ANSWER: No. The Air National Guard CT-39's were not part of the beddown of the 80 leased C-21A's currently being delivered to MAC active units. Only the active's operational support aircraft fleet of 120 CT-39A's was replaced through the combined lease arrangements with Gates Learjet and Beech aircraft.

C-21S

QUESTION: I understand that Gates Learjet is not desirous of leasing additional aircraft under the present contract but has made an offer to provide 4 C-21s at a negotiated price considered competitive. General Conaway, would you recommend that Congress authorize the procurement of 4 C-21s in the FY 86 Appropriations as a cost savings action?

ANSWER: The C-21 was the jet aircraft chosen in the Air Force source selection competition for a follow-on to the CT-39 support aircraft. With its improvements in fuel efficiency over the CT 39 and the aircraft spares and manpower savings possible through contractor logistics support of the aircraft, I recommend the procurement of 4 C-21s as replacement for the 4 CT-39As assigned to the Air National Guard.

SUBCOMMITTEE RECESS

Senator RUDMAN. The subcommittee will stand in recess until 10 o'clock, Tuesday, April 2, when we will reconvene to receive testimony on the Strategic Defense Initiative.

[Whereupon, at 12:20 p.m., Thursday, March 28, the subcommittee was recessed, to reconvene at 10 a.m., Tuesday, April 2, 1985.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 1986

WEDNESDAY, APRIL 3, 1985

U.S. Senate,
Subcommittee of the Committee on Appropriations,
Washington, DC.

The subcommittee met at 10 a.m., in room SD-192, Dirksen Senate Office Building, Hon. Ted Stevens (chairman) presiding.

Present: Senators Stevens, McClure, Kasten, Rudman, Proxmire, Johnston, Byrd, and Sasser.

DEPARTMENT OF DEFENSE

Assistant Secretary of Defense

(Manpower, Installations and Logistics)

STATEMENT OF HON. LAWRENCE J. KORB, ASSISTANT SECRETARY OF DEFENSE (MANPOWER, INSTALLATIONS AND LOGISTICS) OFFICE OF THE SECRETARY OF DEFENSE

DEFENSE MANPOWER REQUIREMENTS

OPENING STATEMENT OF SENATOR STEVENS

Senator Stevens. The subcommittee will come to order.

We are here today to discuss fiscal year 1986 active military and civilian manpower requirements for the Defense Department.

The fiscal year 1986 budget includes approximately $109 billion to pay and support our active military and civilian personnel including funds for a 3 percent military pay raise and a 5 percent civilian pay cut.

SUMMARY TABLE OF ENTITLEMENTS

For the record, Dr. Korb, let me ask the Department to please supply a summary table of military personnel entitlements by subactivity for the Department of Defense, officers, enlisted and totaled, for fiscal year 1980 through fiscal year 1986.

Dr. Korb. Yes, sir.

Senator Stevens. That is Senator Stennis' request actually.

[Clerk's note.—The table of entitlements is being retained by the subcommittee clerk and is available in the subcommittee files.]

COST INCREASES OF ACTIVE MILITARY PERSONNEL

Senator **Stevens**. Since 1980 the real growth in active military personnel costs has been 21 percent while the force has only increased by some 6.7 percent. Average military pay increased 52.6 percent during this period.

We have had some inquiries about the question of entitlements, about incentive payments and some administrative practices the Congress felt had been wasteful.

Recently the defense inspector general said lack of sufficient oversight led to waste and abuse in the rent plus housing program. This subcommittee has questioned the growth of programs such as the variable housing allowance and bonus.

The fiscal year 1986 request will allow for further growth in compensation programs as well as increases in both active military and civilian personnel levels. This budget would fund an additional 25,630 military and 19,052 civilians.

Obviously, with the pressure of the large deficit and the lack of sufficient justification for these increases, Congress will be reviewing this request to determine whether the overall defense efforts can be held at a lower level.

We are happy to see you back here, Dr. Korb. We appreciate your being here this morning.

We want to put your statement in full in the record. We would appreciate it if you would proceed in any way you see fit.

We will pursue the policy of having questions based upon the time the member comes in and remains today.

IMPROVEMENT IN MILITARY PERSONNEL SITUATION

Dr. **Korb**. Thank you, Mr. Chairman and Senator Proxmire and Senator Rudman. It is a pleasure to be here.

I would like to make a few comments after having submitted my statement for the record.

As you know, we inherited about 4 years ago a deteriorating military personnel situation. With the help of this committee and others, we have succeeded in remedying that situation beyond our wildest expectations. We now have a high quality force that provides for immediate defense and serves as a foundation for future needs.

Altough the recruiting environment is becoming more challenging because of the economy and demographics, we are confident we can continue to satisfy our manpower objectives if we receive adequate recruiting resources, fair and competitive pay levels and the continued support of the Congress and the American people for the military.

IMPROVEMENTS IN RECRUITING

In terms of recruiting, last year was the best year in history. Ninety-three percent of our new recruits in the active components had high school diplomas; 93 percent scored average or above average on the armed forces' qualification test. This is much better than the general population.

We are, as I mentioned, having some difficulties and in the first quarter of 1985 the Army, Navy, and the Air Force narrowly missed their objectives for new contracts. They missed them by a very small percentage, about 1 percent, but because of the fact that we had 40 percent of our people in what we call the delayed entry pool, we should be able to get through 1985 with no problem.

PERSONNEL RETENTION

Retention has been equally good. Our first term reenlistment rate increased from 39 percent in 1980 to over 50 percent last year.

CAREER REENLISTMENT

Our career reenlistment rate increased from 71 percent to 85 percent.

Although we have some shortages in some specific skills, particularly those that are marketable in the private sector and that involve arduous duties, with your help and particularly with our bonus program, we are confident we can continue to make progress in that area.

RESERVE COMPONENTS

In terms of the reserve components, we also continue to recruit high quality people. Last year 85 percent of the people in the Reserves were high school graduates versus 76 percent in 1980 and 90 percent scored average or above average on the enlistment test compared to 78 percent several years ago.

Recruiting for Reserves is also becoming more difficult. In 1984 the Army National Guard and Naval Reserve missed their recruiting objectives. Because retention was good, the overall reserve strength reached a record level of almost 1,050,000.

EMPHASIS ON MILITARY FAMILIES

One of the things that we are focusing on this year is our military families. Because we recruit individuals but retain families, we want to place increasing emphasis in that particular area.

Last year we created a Family Policy Coordinating Committee. Right now we are doing a DOD-wide family survey. We are working with agencies outside the Department in support of our problems, and we are incorporating family issue awareness training in our officer training curricula.

I have set up in my own office an Office of Family Policy which reports directly to me.

Now, we will need, if we are going to continue to emphasize the family and improve the quality of life for military families, the support of the Congress and this committee, specifically for improvement in PCS reimbursements.

Right now about half of our members have to borrow money every time they move, and they don't receive full reimbursement for the actual cost of moving.

DEPENDENT STUDENTS

We would like to get equity in the dependent student travel program so that we could get money for CONUS travel for military dependents like the civilians get.

We are concerned about the potential transfer of the Department of Defense dependents school system from the Department of Defense to the Department of Education because it is an integral part of defense and it has been an academic success. We are concerned that that transfer would cause many technical and legal problems in both the Department of Defense and the Department of Education. We support permanent repeal of the provision mandating its transfer.

REENLISTMENT BONUSES

We are going to need congressional support for our bonuses. Our selective reenlistment bonuses are an excellent tool for retention, particularly in hard to fill skills. We have asked for an increase this year of about $44 million, or 22 percent, in that area to meet the increased manning requirements in critical skill positions which increase as the services modernize and to stop losses in marketable civilian skills to offset the impact of an improving economy.

RETIREMENT PROGRAMS

The subject of military retirement is much in the news. We are continually looking at our system. We did not submit any changes this year for reform because of the fact that the Government retirees, including military retirees, will not get COLA and there was uncertainty about the size of the pay raise.

CIVILIANS IN THE MILITARY

Let me make a few comments about civilians. Civilians are a very, very important part of our total force and are a critical building block in our national defense. They perform functions essential to readiness and the increased funding requested in 1986 will fund growth in such readiness-related areas as spares management, maintenance support, auditing, and control functions.

We are also civilianizing functions that don't require military personnel because this is more economical.

There is a question whether with the lifting of ceilings we are hiring more civilians. It is a little bit too early to anticipate the results. We will submit a report to Congress. We see it goes up in some places and down in others based on our preliminary observations.

Even though we are operating without a civilian ceiling, we are concerned about this area, and we are working as vigorously as we can within the law on our A-76 commercial activities program. This program saves us about 30 percent of the original cost of doing business. We estimate that because of A-76, we are saving over $400 million annually.

We do efficiency reviews of all support activities which are not subject to the A-76 cost comparison. We have a program of productivity enhancing capital investments designed to encourage and finance cost-effective investments in equipment and technologies which result in labor savings.

CONCERNS WITH FISCAL 1986 BUDGET

In closing, let me say that I am concerned about recent proposals which include canceling military pay raises, reducing DOD support personnel, and canceling or reducing increases in personnel for 1986. I think when we come to make those decisions, we should consider the following things.

Military compensation does lag behind the private sector by about 7 percentage points. Without adequate compensation, we won't be able to attract and retain quality personnel, and I underline quality personnel.

Large reductions in support personnel could cause turbulence, a beakdown in our ability to support our force structure, and diversion of personnel from the combat force to support functions. This could reduce readiness.

In terms of management headquarters, which I know is a concern of Congress, let me point out the Department has been subject to management headquarters reductions of 5 percent and 2 percent in fiscal years 1984 and 1985. In fact, one of the problems we have with headquarters reductions is the increased workload imposed by the Congress.

The statutory provisions in authorization and appropriations bills have grown 200 percent since 1970. Other actions have increased by 1,000 percent; and reports required by the Congress, by 1,200 percent.

One-half of our increase for 1986 in military and civilian personnel is for strategic, tactical and mobility forces, the combat forces. The remainder is in intelligence, depot maintenance, medical support, training and other logistics activities that enable the combat force to be ready.

The increased personnel requested in 1986 will operate, maintain and support new weapon systems, ships and aircraft, which I can't stress too much, have already been authorized and approved by the Congress and will be coming into the force.

My final comment. I think we have to be careful not to undo the improvements that have been made in manpower over the last couple of years because of concern about the size of the defense budget. Any changes that we make must be done in a balanced manner.

Thank you very much, Mr. Chairman.

[The prepared statement of Dr. Korb follows:]

PREPARED STATEMENT OF HON. LAWRENCE J. KORB

ASSISTANT SECRETARY OF DEFENSE

(MANPOWER, INSTALLATIONS AND LOGISTICS)

INTRODUCTION

Mr. Chairman and members of the Committee, it is a distinct pleasure for me to appear before you today to discuss our current manpower situation. I will not only tell you where we stand but will also seek your support for initiatives vital to continuing the success of the past four years.

In these days of significant success in the manpower area, there may be a tendency to forget the terrible condition of our armed forces when this Administration first came into office. There were serious manpower deficiencies in both quantity and quality of personnel in the active and the reserve forces. The test scores and educational achievements of our recruits had reached disturbing lows, morale had declined, and the loss of career personnel was aptly described as a hemorrhage of talent. Many of our allies were concerned about our ability to meet our defense commitments.

The Reagan Administration made remedying this situation one of its highest priorities, and with your help we have succeeded beyond our expectations. This country now has a strong, high-quality force that not only provides for the immediate defense but also serves as a solid foundation for future defense needs. We have accomplished this change by offering qualified volunteers the opportunity to become skilled professionals, to be paid a competitive wage, and to make a contribution to the security of the nation. In addition, we have recognized the military family as an integral part of the defense community and have improved the quality of military life and working conditions.

While we in the Defense Department, like our counterparts in other agencies, must search for every available means of saving tax dollars, it is vitally important that we not undo the improvements that have been made in the manpower area. We need your help to ensure that each of the components of our Total Force--active military, reserves, and civilians--continues to perform effectively its share of the job of defending the nation. We also need your help to ensure that we have the resources we need to plan for the future. People must remain our highest priority.

ACTIVE COMPONENT MILITARY MANPOWER

Growth in active strength, improvement in the experience level of the force, and reduction of critical skill shortages are evidence of our success in the area of active component military manpower.

At the end of Fiscal Year 1984, there were over 98,000 more people on active duty than there were in 1980. For Fiscal Year 1986, we are requesting an increase of 25,630 or 1.2 percent from our Fiscal Year 1985 level. Adequate strength is the fundamental determinant of unit personnel readiness, and the small growth requested will support necessary improvements in force modernization programs already approved by the Congress and enhance the sustainability of the current force structure. Manpower is not independent of modernization but is an integral part of our total defense program. As end strength levels are artifically constrained, as they were in Fiscal Years 1984 and 1985 when Congress denied 60 percent of our active component growth, the resulting undermanning of much needed new programs ultimately degrades readiness. We need your approval of funding for our requested growth to support our force structure and weapons systems.

Each of the services met its enlisted recruiting goals in Fiscal Year 1984. We recruited about 330,000 people. Our goal for Fiscal Year 1985 is approximately the same. Educational levels and test scores of the recruits in Fiscal Year 1984 were the best ever and much higher than those of the general youth population:

-- Last year, 93 percent of our new recruits had earned a high school diploma. This figure compares to about 75 percent in the general youth population. Four years ago, only 68 percent of new recruits had high school diplomas.

-- Ninety-three percent of our new recruits scored in the average or above average categories on the Armed Service Vocational Aptitude Battery (ASVAB) compared to 69 percent in the general youth population. Four years ago, only 69 percent of our recruits scored in these categories.

The improving economy and declining youth unemployment, however, have made the recruiting environment somewhat more challenging. To continue attracting the required number of quality volunteers, we must be committed to a program of fair and competitive pay and allowances and adequate recruiting resources. We will need about 3 percent program growth in total recruiting and advertising resources to respond to the more difficult recruiting environment and achieve our enlistment goals.

The loss of experienced people that was occurring in the late 1970's has been halted. Now the reenlistment rate for career enlisted personnel is about 85 percent, compared to about 69 percent in 1979. The total enlisted force has grown about 4.1 percent since 1980, while the non-commissioned and petty officer corps has grown by about 11 percent during the same period. Average years of service in the enlisted force have increased from 5.55 to 5.93 years.

Although enlisted retention is now at high levels, some small shortages still exist in certain skills. This is particularly true in skills that are highly marketable in the private sector or that involve particularly arduous duties. The shortages are primarily in the middle grades and are being alleviated by improved bonus programs, better promotion opportunities in shortage skills, and retraining/reclassification programs.

The most serious officer shortage problems are in nuclear-trained submarine and surface officer communities from the grade of Lieutenant Commander to the grade of Captain. By fiscal year 1986 our shortages in these areas could be as high as 22 percent. It is imperative, therefore, that we continue to get Congressional support for funding incentive programs for these officers.

Our pilot shortages have decreased dramatically from over 5,000 in Fiscal Year 1981 to under 1,000. Pilot retention is affected by hiring in the airline industry. As a result of airline deregulation, hiring has fluctuated quite a bit in the last several years. We are watching this situation very carefully to ensure that we remain competitive.

Another problem that we have related to officers is difficulty in the management of flag and general officers. We intend to resubmit legislation to the Armed Services Committees to establish a comprehensive framework for managing flag and general officer requirements. We need to get away from the temporary solutions of the past couple of years.

We continue to make excellent progress in increasing the role of women in the armed forces. They will continue to be provided the opportunity to pursue careers for which they qualify. This means that military women can and should be used in all roles except those explicitly prohibited by combat exclusion statutes and related policy. Today almost 10 percent of the active force is made up of women. This compares to approximately 2 percent at the end of the draft and about 8 percent in 1980. The number of military women will continue to grow over the next five years because we will increase the opportunities available to them and will ensure that women are made aware of these opportunities.

We also continue to make progress in increasing the opportunities for minorities. Minority officers now constitute approximately 11 percent of the active officer corps. There has been a 25 percent increase in the number of minority officers since 1980. One trend that concerns me, however, is the tendency of minority junior-grade officers to leave the services at a higher rate than their non-minority counterparts; we are trying to discover the reasons for this trend so that we can remedy it. Minority enlisted percentages remained relatively constant during the past four years at about 30 percent.

Since this Administration took office, we have placed strong emphasis on improving military training as an important way of enhancing force readiness. We believe that the Services can benefit from improved coordination and information exchange on the use of training technology. One major initiative in this direction has been the establishment of the Defense Training Data and Analysis Center (TDAC) in Orlando, Florida. TDAC will serve the entire Defense training community through the collection and analysis of training data and the dissemination of lessons learned. We have also tightened coordination of key training issues within the Office of the Secretary of Defense and the Joint Staff through the establishment of an OSD Steering Committee on Training and Training Technology. The Service budget requests for Fiscal Year 1986 provide the resources for sound, realistic training. The penalties for stinting on training resources are severe, and we ask your full support for funding our training programs.

The Veterans' Educational Assistance Program (VEAP), our current educational benefits program, will be suspended on July 1, 1985 and will be replaced with a new program, the "Veterans' Educational Assistance Act of 1984" (GI Bill). To ensure that this new education program meets the department's recruiting and retention needs, we will shortly be requesting that the Armed Services Committees make certain legislative changes to allow for a more orderly transition from VEAP to the new GI Bill.

As I indicated in my statement last year, much of the success of our recruiting and retention programs can be attributed to improvements in military compensation since 1980. The two large pay increases in Fiscal Years 1981 and 1982 were very important in making up the substantial gap that existed between military pay and private sector wages. Equally important were the implementation of the Variable Housing Allowance (VHA) and significant increases in special and incentive pays, bonuses, and travel reimbursements.

The compensation program we are proposing for Fiscal Year 1986 is a comprehensive package designed to continue the successes we have achieved in recruiting and retention and to improve the quality of life of service members and their families. In light of the government-wide efforts to reduce the federal deficit, we are requesting funding for only a 3 percent military pay raise for Fiscal Year 1986. Recognizing that this will not match projected private sector wage growth, we are asking Congress to reduce the impact of a smaller pay raise by approving it one quarter early, making it effective July 1, 1985.

In addition to the 3 percent pay raise, we are also requesting funding for substantial improvements in Permanent Change of Station (PCS) reimbursements. These include

-- a graduated increase in household goods weight allowances to a minimum of 5,000 pounds for junior enlisted members and a maximum of 18,000 pounds for senior grade enlisted members and officers,

-- a travel allowance for dependents of junior enlisted members in CONUS, and

-- funding for up to four days temporary lodging expenses not to exceed $110.00 per day.

These changes will allow for a fairer reimbursement of the costs of the PCS moves that we require of our men and women. When making a PCS move, the average service member is now reimbursed for only about one-fourth of the out-of-pocket expenses incurred. In addition, over half of our service members need to borrow money to cover their PCS moves. I am unalterably committed to ensuring that the costs of government-directed moves are borne by the government, not by individual service members.

We are also studying a dental care program for dependents of active duty personnel. Such a program may be needed if military medical programs are to continue to compare favorably with private health care plans and remain an effective recruiting and retention incentive.

In addition, we are considering legislation to implement those recommendations of the Fifth Quadrennial Review of Military Compensation which are designed to improve our special and incentive pays and survivor benefits.

We ask for equity in the dependent student travel program. As authorized, the dependent student travel program provides long-sought equity for service members overseas. In its original form, the program authorized government funding of one round-trip per year for dependent students from their sites of education in CONUS to their parents' residences overseas. Federal civilians overseas already have this benefit. The authority was subsequently modified to eliminate funding of the CONUS portion of travel for dependents of military personnel but to retain it for dependents of DoD civilians. I am strongly opposed to this modification because it is inequitable and because it imposes an added financial burden on military parents who are required to serve overseas. We solicit your support in correcting this inequity and in full funding for the dependent student travel program.

Additionally, it is essential that our members be protected from a reduction in pay through changes in federal tax policy. Current tax treatment of allowances and other military benefits is integral to the military compensation system and should not be changed without corresponding corrections in the total military pay package.

The Department of Defense has not yet submitted any recommendations for reform of the military retirement system. Because of the nature of this issue, it is constantly under review. The current system is fulfilling its purpose as a management tool for manning the force with the quantity and quality of people required to sustain a ready force. Consequently, in order to alleviate any adverse effects on force manning, any changes to military retirement must be done in the context of the overall compensation package. In addition, it should be noted that this year's budget contains a provision whereby government retirees, including military personnel, will not receive a cost of living adjustment in 1986.

While compensation is tremendously important, it is not the only factor that affects recruiting and retention. Poor working and living conditions discourage people from enlisting and reenlisting and, therefore, hurt the readiness of our forces. We recognize that service members make career decisions based on the perception they and their families have of the quality of their lives; we feel that an important part of the commitment we have to our people is to provide them excellent installations on which to work and live. As a result, with your assistance we have increased the average annual investment in facilities over that of the late seventies by more than 35 percent. This increase has resulted in major improvements to facilities in CONUS and overseas that have raised the productivity of our people.

In an effort to improve productivity at our installations, we began an experiment a year ago designed to give selected installations more authority and control over their own resources. The experiment, our Model Installations Program, has resulted in much deregulation, increased attention to installations by their commanders and staffs, and most importantly, improvements in the facilities and operations of these selected installations that have been funded by the money saved by good ideas.

We feel we must provide our military families at least a basic level of services normally provided by civilian communities. Therefore, our installations' support program includes a wide range of community facilities. For example, we are operating 272 family service centers on DoD installations worldwide. To meet the growing demand for child care, the Department operates nearly 550 child care facilities on some 400 installations worldwide. Family day-care programs are also being expanded. Funding priority is given to facilities in locations that have an absence of such support, especially at new or expanded mission sites. We believe the burden of the cost of community facilities at such sites should be borne by appropriated funds.

Our investment in facilities affecting the quality of life of our service members and their families is paying off. Everywhere I go, our commanders report marked improvement in working and living conditions. In the work areas, our efforts have engendered pride and improved the morale of the troops.

Even though we have accomplished a lot, much remains to be done; we need the continued support of the Congress for the family, bachelor, and troop housing programs requested in our Military Construction Bill as well as for those programs requested in our Defense Authorization Bill.

Our attention to the quality of life of our people encompasses more than construction, renovation, and maintenance of our physical plant. It includes many individual DoD programs that contribute to sustaining personnel readiness by recognizing the importance of the people that make up the armed forces.

Among these programs are medical care, child care, religious activities, commissaries and exchanges, and other family support activities.

Last year, we created the Family Policy Coordinating Committee to bring together policymakers throughout DoD to shape and influence family support efforts. As part of these efforts, we have commissioned a DoD-wide family survey to poll approximately 131,000 service members and 75,700 spouses on their satisfaction with military life and needs for additional support. We have extended our efforts to work with agencies outside DoD in support of family programs. Additionally, we have made great strides in incorporating family issue awareness training into officer professional school curricula. To ensure that we maintain our momentum in this area, I have established an office of family policy reporting directly to me.

I do not want to leave the subject of military families without calling to your attention the important subject of our overseas schools. Since 1979, the Department of Defense Dependents Schools (DoDDS) have been operating under the statutory requirement for their transfer from the Defense Department to the Department of Education. In response to our legislative initiatives, the transfer has been postponed by Congress twice; although on both occasions, a permanent repeal was not passed. The current mandatory transfer date is May 1986.

Both DoD and the Department of Education endorse a permanent repeal of the transfer requirement. A repeal is desirable for several reasons. The overseas schools have clearly demonstrated their excellence, which to a large extent is due to the leadership and support provided by the Department of Defense. They are unquestionably an academic success, as evidenced by student performance on nationally administered tests such as the Scholastic Aptitude Test. School administration, logistical support, facilities maintenance and construction, personnel services, and budget preparation are best carried out by the Defense Department. The school system has been an integral part of the Defense family for nearly 40 years, and its transfer to the Department of Education will create a myriad of technical and legal problems in these critical areas of support. Service personnel appreciate, expect, and are entitled to the excellent education DoDDS provides their children. The transfer of DoDDS to the Department of Education would not result in better educational opportunities for the children of U.S. service members overseas. I request your support in ensuring that DoDDS is retained within the Department of Defense, and appreciate the appropriating committees' not providing funds for the transfer of DoDDS over the past two years.

Before leaving the subject of people serving overseas, let me point out that we recently completed a review of the Fiscal Year 1986 requirements in European NATO countries and found that we need at least 329,869 U.S. military personnel permanently stationed ashore in these countries at the end of Fiscal Year 1986. However, the statutory ceiling on this number will only allow us to have 326,414.

The Secretary of Defense, the Joint Chiefs of Staff, and I hope the Congress will repeal the permanent ceiling on European troop strengths. We are managing this issue aggressively and will continue to ensure that the number of military people in Europe is minimized, consistent with our need to have a strong deterrent partnership with our allies. We will inform the Congress of our plans for European strength each year in the Defense Manpower Requirements Report.

RESERVE COMPONENT MANPOWER

Although some of the management functions related to Guard and Reserve activities are now handled by the Office of the Assistant Secretary of Defense for Reserve Affairs, I am still responsible for Total Force manpower policy; that is, for analyzing our overall manpower requirements and allocating the total force structure between the active and reserve components and between the civilian and military components.

The Reserve Components are key elements of our Total Force. In Fiscal Year 1984, Selected Reserve strength reached an all-time record level of almost 1,046,000 members. For our Selected Reserves in Fiscal Year 1986 we have requested an increase of 47,100 from the Fiscal Year 1985 level, almost double the increase requested for the active forces. My policy continues to be to use reserves wherever possible. The over one million members of the Selected Reserve are highly trained, highly skilled professionals whose sense of duty and demonstrated ability are cornerstones of our national defense.

In the event of a conflict, the individuals and units of the Guard and Reserve will deploy with the active forces. Current mission assignments demand that many of their units be as fully capable, and as professional, as their active component counterparts.

Total defense costs are reduced by maintaining significant military capabilities in a reserve status rather than maintaining all military forces on active duty. However, the proper mix of active and reserve forces is more than just a matter of cost. We must consider overseas deployments and peacetime missions for which, in many cases, part-time reserve forces are not appropriate. We must ensure that there are sufficient active forces for the early stages of reinforcement to NATO or to trouble spots elsewhere in the world.

Last year we re-examined the way we make decisions about the mix of active and reserve forces. During this review, we discovered that each decision must be addressed on its own merits. We also found that a decision to add or transfer units or missions to the reserve forces requires long-term planning and preliminary funding.

The mix of active and reserve forces must be decided in a deliberate process in which the differences in capability and cost of the active and reserve choices are weighed so that a balance is achieved between the competing demands: a credible deterrent and a realistic, sustainable warfighting capability at least cost.

CIVILIAN MANPOWER

Our civilians constitute another of the critical building blocks used to provide a cost-effective mix of resources to carry out the Department's mission.

DoD treats civilian manpower as a resource to execute programs. Operations in a ceiling free environment have increased the emphasis on appropriately matching work force plans to projected workload. At the end of Fiscal Year 1984, the Department of Defense employed 1,085,474 civilians. For Fiscal Year 1986, we are requesting funding for a level of manpower resources of 1,106,828, an increase of 19,052 or 1.7 percent over the Fiscal Year 1985 authorized level. The growth will occur principally in readiness-related areas such as spares management, maintenance support, and auditing and control functions. We are also continuing our efforts to civilianize functions that do not require military personnel.

DoD civilians perform functions essential to near- and long-term military readiness:

-- Nine percent of the Fiscal Year 1984 civilians were employed in auxiliary functions such as research and development and centrally managed communications.

-- Thirty-five percent were employed in logistics functions.

-- Fifty percent were employed in base operations, real property maintenance, training activities, medical care, and other associated activities.

-- The remaining six percent of the DoD civilian work force are spread across a variety of functions which provide essential support for our military personnel and improve the efficiency of the Department's operations.

One area where civilians make a significant contribution is the Defense Agencies. The Defense Agencies exemplify the Department's long-standing emphasis on improving the way we accomplish our mission. They have been organized under authority granted to the Secretary of Defense to integrate under a single agency any supply or service activity common to more than one military department whenever he determines that this arrangement will be more efficient, economical, or effective.

The Defense Agencies are essentially civilian organizations, although there is always a small mix of military staffing to ensure that there is an adequate understanding of the requirements of the services. The basically civilian makeup of the Defense Agencies ensures economies of pay, longer corporate memories, and higher technical skills than is readily achieved from a military manpower pool with its frequent personnel rotations.

The distribution of civilians among the services and the defense agencies is based on the changing missions of these components, the differing workloads associated with those missions, and the Department's use of alternatives to the civilian work force. These alternatives include using temporary employees and overtime, contracting workloads to the private sector in compliance with OMB Circular A-76, and using capital equipment as a substitute for more costly labor.

Under the A-76 program, the Department has competed approximately 35,000 positions with the private sector since 1979. In-house work forces won about 50 percent of the competitions. The A-76 competitive process is now saving us about 30 percent of the original cost of doing business--about $410 million annually. We intend to continue our efforts to achieve economies and efficiencies through the A-76 program, while accommodating Congressional guidance on this program.

We also conduct DoD-wide efficiency reviews of all support activities not subject to A-76 cost comparisons. These reviews analyze mission assignments, establish performance work statements for these missions, and then seek out and employ the most efficient methods for performing these requirements.

We involve our DoD work force in productivity by using behavorial techniques such as Quality Circles, performance-based incentive systems, job enrichment, and organizational development programs. We also have in place a range of Productivity

Enhancing Capital Investment programs to encourage and finance cost-effective investment in equipment and technologies.

The Fiscal Year 1985 DoD Authorization Act excluded all DoD operations from civilian ceiling controls. This exclusion followed the lifting of civilian ceilings in DoD industrially funded activities in Fiscal Years 1983 and 1984. I have issued guidance to the Services and Defense Agencies on operating without civilian ceilings. The guidance stresses prudent and efficient management, including an increased emphasis on labor-saving initiatives. On March 1, 1985, we provided a report to Congress on the results of operating without ceilings. We appreciate the opportunity Congress has given us to show that the Department of Defense can manage its civilian work force efficiently and effectively without end strength controls. Our Fiscal Year 1986 request anticipates operation without personnel ceilings, and we request the funding for these operations.

While Congress has helped us by allowing us to operate without civilian ceilings, Congressionally mandated management headquarters reductions have caused a great hardship. In Fiscal Year 1984, the DoD Authorization Act imposed a 5 percent across-the-board reduction to Defense management headquarters. The Fiscal Year 1985 DoD Authorization Act imposed another 2 percent across-the-board reduction, with a specific ceiling of 1,765 spaces for the Office of the Secretary of Defense (OSD).

Over the past several years, the Department has made a concerted effort to strengthen program and policy oversight from the OSD level in order to reduce waste and improve the management of DoD resources. However, during this same period, there has been increasing pressure from Congress to reduce the size of OSD which has worked at cross purposes with that effort. If the Secretary of Defense is to manage DoD effectively and satisfy Congressional requirements in a timely manner, he must have the requisite manpower resources at his disposal.

Effective management of the Department is a major undertaking, and we believe that an OSD staff of 1,765 is extremely small for this purpose. This is approximately 500 fewer people than were employed in OSD ten years ago, even though the scope, complexity, and importance of the work performed by the staff has not diminished since then. In fact, during this period, the Congress has placed an ever-increasing burden on the management headquarters staffs to provide information, present testimony, and respond to congressional directions. For example, the number of statutory provisions in the DoD authorization and appropriations bills has increased more than 200 percent from Fiscal Year 1970 to Fiscal Year 1985, other actions directed by Congress have grown 1,000 percent, and the reports and studies required by the Congress have gone up by 1,200 percent. Further, the OSD staff amounts to less than one twentieth of one percent of the Department's total authorized manpower.

CONCLUSION

We are proud of our accomplishments and mindful of how far we have come in the past four years. But we should not become complacent; to do so would put at risk what we have accomplished. A number of manpower challenges still remain.

To meet current demands, and at the same time provide a sound foundation for the future, we request your support for:

-- Funding for increases in the Fiscal Year 1986 active component military manpower strengths of 1.2 percent over Fiscal Year 1985 levels;

-- Funding for our compensation initiatives, especially those involving PCS; and for all programs to improve the quality of life for military families;

-- Permanent repeal of the transfer of DoDDS to the Education Department;

-- Funding for increases in recruiting resources;

-- Funding for increases in resources for Selective Reenlistment Bonuses and Special Duty Assignment Pay;

-- Passage of general and flag officer legislation;

-- Continued support for funding training resources including ammunition, fuel, repair parts, and other resources that support flying hours, steaming days, and other forms of training activity;

-- Support for our legislative modifications of the new GI Bill;

-- Increases in Fiscal Year 1986 funding to support civilian manpower in readiness related areas such as spares management, maintenance support, and auditing and control functions;

-- Recision of the 2 percent cut in Defense management headquarters strength and the end strength ceiling of 1,765 on the staff of the Office of the Secretary of Defense.

With your help, we can successfully maintain the armed forces that we have rebuilt and continue the work of planning for the future.

POSSIBLE FREEZE IN MANPOWER

Senator STEVENS. Dr. Korb, I am a little disturbed about the reductions, as you are, but they are a reality. Senator Goldwater and I have been trying to get some guidance as to priorities within some of these functions.

As far as manpower is concerned, it obviously faces at least a freeze. I am disturbed about the partisan implications in the recent reports over the weekend concerning the concepts of trying to hold down the growth in the payroll of the Department of Defense, both the military and civilian side. I don't think it does the Department or the Congress any good to get into partisan bickering over proposals.

Are you going to be able to give us any guidance as to where you think these cuts can be imposed without having an adverse impact on morale and the objectives of the DOD program?

I am talking about limitations now on end strength and on the requests for increases as far as personnel costs are concerned.

Dr. KORB. Senator, I think if you take a look, our active duty force increase this year was held down because of the fact that we knew that there would be budget constraints. A 25,000 increase, given the increasing force structure that has already been approved, was very modest and the minimum that we needed.

In conforming to the directions of the Congress over the past couple of years, rather than adding people to the active payroll, we have put more emphasis on the Reserves. Because it is more economical we have asked for almost twice as many people in the Reserve to accommodate transferred missions and force structure.

The way we used to budget for civilians is that we would have a ceiling imposed by OMB and by the Congress. Money would be appropriated for the work that the civilians do in the operations and maintenance account.

Last year the law was changed and they told us not to come in with a ceiling. The money stays the same. What we are giving you is an estimate that without ceilings, given the workload that we have and the money in the O&M account, we estimate you would have 19,000 more full-time civilian employees on the payroll at the end of the year.

If the Congress should impose a ceiling without changing the workload, what would happen is that no money would be saved; rather than hiring full-time people, we would have the same people and work them overtime or we would put temporary people on the payroll.

CEILING AND REDUCTION IN FUNDING

Senator STEVENS. My understanding is that they have imposed both the ceiling and a reduction in funding?

Dr. KORB. If they did that we would have to ask that we be left the flexibility to decide what work we need done because most of those civilians are people who, for example, overhaul ships.

Getting to your other point, whatever we do to the budget, whatever changes we make, these changes should be done in a balanced manner.

If we can't afford to fund the level that the administration has asked and we want to fund a lesser level, let us have enough people to man the systems that you authorized for us and allow us to perform the workload that you expect the Department to do.

Finally, give us as much flexibility as is possible. In other words, if you decide you cannot fund our increase, but would like us to take a decrease, please give us the flexibility to allow us to decide where that should go so that we can make the best use of whatever people the Congress authorizes us to have.

VARIABLE HOUSING ALLOWANCE

Senator **Stevens**. Let me get into a provincial matter. You know my feelings about the variable housing allowance. I have been rather critical about the way that has been administered.

The net result was that I am informed that the pressure for extending the variable housing allowance and changing rent plus to VHA in my State of Alaska for military personnel came from the Department. I am informed that putting VHA into Alaska will actually cost the Department of Defense more.

Can you explain to me why the Department wants to retaliate against military personnel in my State because I am critical of the overall management of the program?

Dr. **Korb**. Quite to the contrary, we think because of the unique situation of your State and Hawaii, in that they are part of the continental United States, and because of the housing situation that prevails, our military people are best served through rent plus.

The variable housing allowance just cannot deal with those particular situations. As a matter of fact, it was the General Accounting Office in 1981 that recommended we use rent plus in overseas areas, including Alaska and Hawaii.

Senator **Stevens**. For three times now the Department and the House have tried to change that.

Dr. **Korb**. We have not supported that. In fact, nothing could be farther from the truth, Senator.

I worked very hard last year to make sure that rent plus stayed in the bill. It was knocked out by the House. We opposed that and working with you and your staff, we were able to get it back. We are all for rent plus in Alaska and Hawaii.

VHA MANAGEMENT CRITICISMS

Senator **Stevens**. I am still critical of the management of the VHA. I remember so well the first VHA proposal that was presented to the subcommittee before I became chairman. I recall it was implemented the first year I was chairman, but the concept was presented the year before that, and it was that the Department ought to have the power to make payments to those people who live off base who pay exceedingly high rent.

When we really look at the program now, as I have said before, instead of being a program that is selective, it now applies to, I think, 90 percent plus. More than 90 percent of the people in the military get payment under a program that was supposed to be administered to take care of those few people who pay high costs from living off base.

I still remain critical of it. I think that is the kind of thing that has led to a complete lack of confidence in the administration of programs that are discretionary as far as the Department is concerned. This one has gotten totally out of hand.

In my judgment, we ought to combine both the basic allowance for quarters and VHA and put some restraints on it. I think that is primarily what led to Senator Stennis' request for the study. I presume you know of that study.

I have asked for a followup of that study from GAO because that study omitted in the comparison between military and civilian disposable income some of the fringe benefits that very much tilt the scale in favor of the military.

That leads me to my last question. The real problem that I have, and I think that you have to help us with, is to get to this whole question of administration of these programs.

How can we be sure that the intent of Congress that some of these benefits be administered in a discretionary way is followed?

BONUSES

We thought bonuses would be paid only to those people who absolutely had to be retained, squadron commanders, people with specific talents. We find that they are now routine. Everybody gets them as they sign over apparently.

I think the worst part really of what I have seen develop in this personnel area in the last 2 or 3 years is the lack of real capacity to discriminate between people as far as these various incentives are concerned.

Can you tell us, is there going to be anything done to make these programs into the kind of incentives we had in mind to keep the key people and not just use them across the board?

Dr. **Korb**. Senator, I share your concern. We should not waste $1 of the taxpayer's money in any of these programs.

On VHA we submitted a study to the Congress last year recommending a revised method for computing the rates which would reduce the costs of the program. Congress accepted our study and passed legislation implementing our recommendation.

You and I have had this discussion before. Before the legislation revising the method for computing the rates, members were entitled to a VHA in those areas where the cost of housing was 115 percent more than BAQ. I know you thought it would be only in high cost areas. Obviously, the cost of housing outstripped BAQ by more than 115 percent in almost all locations. We didn't pay it in any place other than where the housing costs went over 115 percent.

Under the revised system, we now pay VHA in areas where local median housing costs exceeds 80 percent of the national median housing costs, by pay grade. We compute the rates using our survey of military housing costs supplemented by data from the Department of Housing and Urban Development, and the Bureau of Labor Statistics. I know that you remain critical of the program, but I want to emphasize that we did something on VHA last year to hold down the costs.

OFF-BASE RENTAL COSTS

Senator **Stevens**. I don't want to take all the time, but let me tell you that it was justified as a program to pay off-base rental costs. You are now making payments to people who have owned homes in this vicinity for 20 and 25 years, who paid prices back in the 1960's, and they are getting a variable housing allowance based on the rentals that their fellow employees are paying who don't own homes.

The program was not intended to be a payment to homeowners. It is a total windfall, a windfall my staff estimates to be in excess of $120 million for that one item alone. Now, that is absolutely miscarrying the whole intent of Congress.

I try to get folks to support the Defense budget and I run into things like this all over the place. It is not only one.

Why in the world would you make payments to someone who has owned a home since the 1960's under a program we gave you to help people who came into this town, didn't own a home, had to rent a home, had to rent off base?

Why did you do it? You administer it.

Dr. **Korb**. Again, Senator, the law said that when the average exceeds 115 percent——

Senator **Stevens**. They are not paying rental costs.

Dr. **Korb**. I understand that. I do not have the exact figures on the number of people who own homes, for example, in the Washington area.

If you look at the turnover in the military, we take in each year over 300,000 people. I would suspect that the number of homeowners in the area is comparatively small and people stay in this area for a short period of time.

Of course, we have your appropriations report of last year and we are preparing legislation that will comply with that particular report. I would like to state for the record that the Department opposes enactment of this legislation.

Senator **Stevens**. I intend to pursue this in this bill. I don't want to belabor it. I would like to see you turn out that report.

Let me move on to my friend, if I can, Senator Proxmire.

Senator **Proxmire**. Thank you, Mr. Chairman.

I think you have a very good point. I want to do all I can to support and help you on that.

MILITARY PERSONNEL IMBALANCES

It seems fairly evident, Mr. Korb, that this is going to be an exciting year for you, perhaps your most challenging year. Obviously, you are going to have a tough time as Secretary for Manpower because that has been made clear among some members of the Senate. There does seem to be some case for some manpower cuts.

We have over 1 million people, as I understand, civilians in the Pentagon, as many as we have in all the rest of the Government combined. We have some people arguing we have a sluggish logistic tail. Some people argue we are heavily over-officered in relationship to the enlisted men.

On the other hand, I would feel very strongly that personnel is the name of the game. No matter what equipment you have, no matter what kind of procurement you have, unless you have people who are trained, skilled, motivated, well led, you won't have a strong military unit or strong football team or strong bank or anything else.

It is the personnel that counts in making an organization successful. I certainly understand that.

REDUCTION IN MANPOWER LEVELS

Let me ask you. The Senate Armed Services Committee has taken a vote to reduce manpower levels in the Department of Defense to meet budgetary goals.

Do you have an opinion of the effect of the Armed Services Committee vote on readiness, morale, recruitment and retention?

Dr. KORB. If, in fact, what I read in the paper is correct that we would lose 100,000 civilians and 75,000 active duty military people, we would go back to the levels that existed in the late 1970s. We would be basically back to the levels that existed when I came into this job.

If we can recall what happened at that time, there were stories about who will fight for America, what is wrong with the U.S. Armed Forces. We had former Secretary of Defense Melvin Laird putting out a booklet saying that we have to do something about our personnel situation.

At that particular time, because we didn't have enough civilians, we were using 20,000 military people as borrowed manpower to do civilian jobs that were necessary. Since that time we have increased the number of weapons in the inventory because of the large increases we had in the Defense budget.

So, in my view, you would have a very severe manpower problem if you had 1980 man levels supporting the forces of 1986. Now, if that occurs, I think we would have a severe readiness problem. Readiness is a function of personnel; and personnel are one of the key factors in readiness.

Yes, I am concerned about it. In terms of recruiting, we would probably have to slow down recruiting very drastically because of the size of the total force. We take in, annually, a little over 300,000 people. If we had to absorb a cut of 75,000 people, given the fact that you have people who have enlistment contracts it would slow down recruiting drastically, which would cause problems in the out-years in terms of the smooth flow of people.

In terms of retention, there would be obviously some very qualified men and women that you could not keep on because you simply could not fit them within the particular end strength.

EFFECT OF PERSONNEL CUTS ON MORALE

Senator PROXMIRE. How about the effect on morale?

Dr. KORB. I think using military people as we did 5 years ago as borrowed military manpower was very tough on morale because you had people recruited to do one thing that performed another job.

If as another example, we did not fully man our ships, we would have morale problems: We would have problems with the rotation base because we would have to leave people at sea longer. If we wanted to man our ships and we had to cut spaces out of the shore establishment, we would probably, have to leave people out of the United States longer, unless we cut down your overseas commitment.

RECRUITING PRACTICES

Senator PROXMIRE. On the other hand, if you recruit on the basis of recruiting fewer people, can't you raise the quality of the people you recruit?

Dr. KORB. Very definitely.

Senator PROXMIRE. So, your quality would improve?

Dr. KORB. We could be much more selective, there is no doubt about that. Right now we are not having any problem. We have the highest quality people we have ever had.

In fiscal 1984 we had 93 out of every 100 people who were high school graduates or scored average or above average on the Armed Forces' qualification test. There is very little room to improve over that.

RETENTION REQUIREMENTS

Senator PROXMIRE. In retention, too, you can retain your best people?

Dr. KORB. You can, but what happens sometimes when you tighten the retention requirements, you might keep a person, the brighter person, who was not really going to make a career but will stay only one more term and you might not keep the person who may not have scored as well on a particular test but who might have made a good career soldier, sailor, airman, or marine.

PERMANENT CHANGE OF STATION MOVES

Senator PROXMIRE. You indicate you want to improve reimbursement for permanent change of station moves within the military?

Dr. KORB. That is correct.

Senator PROXMIRE. I understand the need for full reimbursement for military personnel when they are forced to move. I am concerned about the number of moves required.

At any one time on any given day, how many of our personnel are in transit?

Dr. KORB. I don't have the exact figure for the record, but given the fact that we have 40 percent of the Army, for example, overseas and the average tour overseas is 3 years, or if it is unaccompanied, it is 1 year, there are a lot of people moving at any given time.

COSTS OF PCS MOVES

Senator PROXMIRE. For the record, will you give me the most precise figures you can?

Dr. **Korb**. Yes.

Senator **Proxmire**. What is the annual cost of the moves?

Dr. **Korb**. The permanent change of station budget basically is what you are calling for?

Senator **Proxmire**. Let me give you what I want and you can supply it for the record. The average PCS moves in a normal career and what is being done to limit the number?

Dr. **Korb**. We can provide you that. We have been concerned about that. We have increased the tours. Over 83 percent of our PSC costs are associated with people coming in and going out, of the service training, and overseas moves. That is where the bulk of the money is spent.

Senator **Proxmire**. Our figures show 69,000 people in transit on any given day.

Dr. **Korb**. We are a little higher. I have just been given 166,000 as the figure.

Senator **Proxmire**. 166,000 in transit on any given day?

Dr. **Korb**. At any given time, yes, sir.

Senator **Proxmire**. That is fantastic. Your travel costs are really enormous on that basis.

Dr. **Korb**. Again, you have to realize, for example, you take a ship that comes in, a Trident submarine that comes off station. After you give the people shore leave, you are going to have to send them to school to keep up their skills. Not all the schools are in the same area as the port.

For example, we take into the service about 30 some odd thousand people a month.

Senator **Proxmire**. For the record, if you can suggest any way that we can make economies in that enormous expense, we would appreciate it.

Dr. **Korb**. You are correct; it is 69,000. I was incorrect.

BASE CLOSINGS

Senator **Proxmire**. Are you familiar with the list of military bases that could be closed that was provided by the Department of Defense to Senator Goldwater?

Dr. **Korb**. I certainly am.

Senator **Proxmire**. Do you believe these bases could be closed without harm to our national security?

Dr. **Korb**. The bases on that list are illustrative of the type of bases that could be closed without impacting on national security. The missions performed at these bases are essential however; and, if these bases were closed, we would have to perform them elsewhere.

Senator **Proxmire**. What savings could be made by closing these bases?

Dr. **Korb**. After you expand the up-front cost of a little over $2 billion to relocate the people and equipment and build new facilities, within 3 to 4 years after you close the bases, you would begin to get annual savings of about $500 million.

Senator **Proxmire**. Why don't you send up legislation to close the bases?

Dr. Korb. We have sent up legislation that would enable us to close bases quickly. That legislation, which has been introduced by Senator Goldwater, basically waives a lot of the restrictions that may drag base closures over a long period of time.

My concern is this. We now have to come to Congress and announce we would like to close all those bases. We will get a lot of people, obviously, very concerned because you are talking about people's jobs in communities.

We wait for 3, 4, 5 years and then are not able to close the base because of all the requirements that we have to go through to close them. So, what we have proposed in this particular piece of legislation that Senator Goldwater has introduced is if in fact we can waive these requirements and say we are going to close these bases and we know they will be closed, and money will be provided to do it, then in fact, we can go ahead and close some bases.

Without that, we get a lot of people very upset, and nothing happens.

Senator Stevens. Senator, my clock is not working. We have turned it off now. But you are beyond 10 minutes. Your last question.

Senator Proxmire. Could you submit the base closing list to our committee for the record along with relevant cost savings?

Dr. Korb. We certainly will.

Senator Proxmire. Thank you, Mr. Chairman.

BASE CLOSURES

Estimated annual savings

Base	*Thousands*
Army:	
Fitzsimons Army Medical Center, CO	22.1
Cameron Station, VA	12.0
Fort Wingate Army Depot Activity, NM	4.0
Philadelphia Support Activity, PA (Mission could be transferred; balance of Philadelphia Defense Logistics Agency complex would remain open.)	1.0
New Cumberland Army Depot, PA (General Materiel and Petroleum Activity could be transferred; New Cumberland Army Depot would remain open.)	1.0
Fort Devens, MA	25.2
Jefferson Proving Ground, IN	3.0
Army Materiel and Mechanics Research Center, MA	4.0
Fort Ruger, HI (Transfer to Army National Guard)	.15
Letterkenny Army Depot, PA (Logistics System Support Activity could be consolidated elsewhere; Letterkenny Army Depot would remain open.)	3.0
Navy:	
Camp Smith, HI	2.0
Naval Shipyard Philadelphia, PA	57.0
Naval Air Station South Weymouth, MA	9.0
Naval Air Development Center, Warminster, PA	45.0
Naval Regional Medical Center Oakland, CA	16.0
Naval Station Seattle, WA	9.0
Naval Complex Great Lakes, IL	54.0
Naval Air Rework Facility Alameda, CA (Aeronautical Maintenance Activity could be transferred to other NARFs; (NARF Alameda would remain open.)	31.0
Air Force:	
Chicago O'Hare, IL (Reserve Component)	7.0
Blytheville AFB, AR	41.0
W.K. Kellogg Regional Airport, MI (Air National Guard)	2.0
McConnell AFB, KS	43.0

NO REDUCTIONS IN COMBAT FORCES

Senator **STEVENS**. Senator Rudman.

Senator **RUDMAN**. Thank you, Mr. Chairman.

Dr. Korb, you and I have had a number of discussions about this over the last few days and the proposal that Senator Proxmire referred to, of course, is my proposal that the Armed Services Committee adopted. I want to talk about that for a moment.

The proposal was not to cut anything out of the combat forces. You understand that?

Dr. **KORB**. That is correct.

Senator **RUDMAN**. The proposal exempts roughly 1.6 million people of all of the combat forces which contain about 70 percent support within those combat forces. It simply targets, I believe we had agreed, the so-called indirect support and auxiliary support.

Dr. **KORB**. Yes.

Senator **RUDMAN**. So, we understand what the proposal is.

Very interesting in the Navy News this morning, Secretary of the Navy John Lehman has made, I think, a remarkable suggestion. He suggests that the Navy Materiel Command and the Navy Electronics Systems Command be closed and be merged with other parts of the Navy bureaucracy. The article says: "As part of Lehman's efforts to shake up systems command. He considers them bloated and stagnant."

Now, Dr. Korb, just because we have to work a fence in front of something does not necessarily mean it has to go to national security. You probably know more about this personnel game than anybody in town.

Would you agree with my contention if you were given the freedom to go into the indirect logistics commands, indirect systems commands and all the bureaucracy over there and not touch the combat commands, you could probably work some efficiencies if you were given the latitude to do so?

Dr. **KORB**. There is no doubt about that. As you and I have discussed, one of the reasons for keeping more people on the payroll is the bases that we have.

For example, the illustrative list reflected the number of people that would be affected if those bases were closed. The number came to about 100,000 people on that particular list.

PERSONNEL EFFICIENCIES IN SUPPORT SYSTEMS

Senator **RUDMAN**. If we look at some of those commands you and I have talked about so that we understand clearly the distinction between what the proposal is and what I read over the weekend. I really think it was fairly inaccurate, and I believe the people who made the statements probably didn't have all the information. We are talking about things like the Defense Logistics Agency with 51,000 people. We are talking about the Air Force Logistics Command with 95,000 people, the Air Force Communications Command with 50,000 people, the Air Force Systems Command with 56,000 people, the Navy Sea Systems Command with about 215,000 people.

All this proposal is saying to you and DOD, given the latitude and freedom to do it, not micromanage it, is there any doubt whatsoever that there could be efficiencies in personnel within those support systems? That is the basic question.

Dr. KORB. Again, as you and I have discussed, if we could waive relevant sections of the laws that bind us, there is no doubt that we could operate more efficiently. One example that comes to mind is a provision passed by the Congress in the fiscal 1983 budget that says no money can be used to set up a single transportation command, so we have to keep three and that causes more overhead. Similarly if you would give us the latitude, for example, to waive some of the plethora of laws that govern procurement, we would also be more efficient. One of the problems we have is that lots of these folks you referred to in these systems commands are there because there are so many laws that have to be carried out before you can go ahead with the weapon system.

For example, the Congress has told us to add auditors. We have added 20,000 auditors in the last couple of years and 10,000 people to manage spare parts because of concerns of the Congress.

CONSOLIDATION OF NAVY BUREAUCRACIES

Senator RUDMAN. I have no doubt, Dr. Korb, that you and I are in total agreement that Congress has certainly contributed to the problem.

I think I would ask you this question. Assuming you can't change some of those things, I don't think there is too much doubt that Secretary Lehman when he talks about consolidating certain Navy bureaucracies can streamline more from the management point of view and result in savings of people.

Is that correct, as you and I have discussed, that you can go in most major bureaucracies that are mature and find that you can trim certain operations and consolidate them and save people?

I don't think you and I have any disagreement about that, do we?

Dr. KORB. No. again, I have to caution you. For example, you take the bureaucracy we call the Pentagon and the Office of the Secretary of Defense which has been cut back by 5 percent and 2 percent.

We were directed by the Congress last year to submit 900 reports. OSD has 1,700 people, which means two people for every report. That's keeping our people very busy responding to requests like that.

Senator RUDMAN. I would just conclude, Mr. Chairman, that there are a lot of people here testifying relating to you either for comment or for absorption.

I had an interesting conversation yesterday with the chairman of the board of one of America's major corporations, who will remain nameless at this hearing for a couple of reasons. He indicated to me when he became chairman of the corporation 9 years ago there were 550 people in corporate headquarters. He said that is as big as it ever will be.

They had 550 people. They were doing $4 billion worth of business. Now they are doing $18 billion worth of business and they still have 550 people at corporate headquarters.

I submit to you that in the U.S. Government there would be 5,000 people in corporate headquarters. I suggest that with all the talk about readiness and everything else, the clear choice you are going to have is major cuts in weapon systems, and major impact on readiness while finding some way to make significant reductions without affecting readiness.

I think you are quite able to do that given the right law, and the right support from the Congress.

Dr. KORB. That is correct. If we get the laws and support, some of which I have talked about this morning, I think there are things that we can do.

PERSONNEL REDUCTIONS IN SUPPORT FORCES

Senator RUDMAN. To summarize here, done carefully and done with the indirect and auxiliary support forces, you could do personnel reductions. I won't talk 10 percent or 1 percent, that is a numbers game. But you can in fact make reductions in certain support forces and certain reassignments and you can do them carefully without affecting rights.

I think that is an important point.

Dr. KORB. Again, as you and I have discussed, the problem in the past is that you get a reduction. There are certain things in defense you can't touch, and you end up hitting them in the wrong place.

Senator RUDMAN. I could not agree with you more. I think you and I are really on the same wave length. The question is how do we get from here to there. This is what this whole problem is about.

Thank you.

HEARINGS POSSIBLE ON OVERSIGHT OF MANPOWER

Senator STEVENS. If we don't implement your proposal when this session of Congress adjourns, I intend to start hearings on oversight of the manpower situation in the Department of Defense, first the Secretary's Office and each of the Joint Chiefs and each of the service departments and go through them chair by chair and try to understand what has happended over there.

Senator RUDMAN. Do you intend to serve five more terms in the Senate, Mr. Chairman?

Senator STEVENS. God and Alaska willing, I shall be here at least that long.

Senator Johnston.

Senator JOHNSTON. Thank you, Mr. Chairman.

LONGER MILITARY CAREERS VS. PREMATURE RETIREMENT

The Senate through Congress was considering legislation dealing with manpower that would essentially stretch out Service terms, do away with premature retirement and in the process really slow promotion which is a money saving and retention proposal.

That proposal did not receive the support of the administration and died. I don't know whether it was in the conference committee, but it died somewhere after it left there.

Because of that, I have heard it expressed to me at least by members of the Armed Services Committee, let's not get back to that sticky wicket because so many of the members have a lot of bases in their States and, obviously, this is not something that is greeted with a great deal of enthusiasm by members of the service who would like to have faster promotion and earlier retirement and in general have better benefits.

That is only natural and human. I think there is a sense in the Congress in general that there is a great deal of waste in manpower and a great deal of room for reform.

Senator Rudman's proposal, while it may not be a perfect one, is one that I have been interested in, I fear that if it is not the best proposal, that it is going to be the kind of proposal that is going to pass.

The only way to get the best proposal is to get it proposed by you, by the administration, after a great deal of thought and change in all these laws. You mentioned, by example, you need nuclear trained submarine and service officers from the lieutenant commander to captain.

It seems to me that the military services ought to basically reorient the whole pay system and incentive systems so that you don't have to pay the lieutenant commander of a submarine the same amount that you pay a lieutenant commander who is a supply officer in some relatively nonskilled position.

Maybe a supply officer is not the right position, but you understand what I mean. In other words, we ought to have pay related to the skill level, difficult and recruitment, as opposed to just putting everybody in the same category and tending to raise everyone in order to get some nuclear trained specialists.

Would you respond to that manpower question?

Dr. KORB. You have asked a very comprehensive question. Let me make a couple of points.

We don't pay the supply corps officer and nuclear power officer the same money. We have special and incentive pays to deal with that.

My feeling is that the military pay system should be fair so that everybody gets a decent living in accordance with their rank and then you have special incentive pay to deal with what you are talking about. That is the way we do it.

One of the problems you have with the military pay system like other systems, is that it has grown up over time and has been adjusted in a kind of piecemeal way for lots of different reasons. Within that particular system we try to do the best we can.

I think we are doing a reasonably good job in dealing with the situation that you talk about and that is why we have these special incentive pays. Obviously, there is a great demand for the nuclear trained officer as opposed to someone who does not have that specialty.

In regard to the size of the force, I think it is important to point out, while I would not argue that there are no inefficiencies, our manpower, even if we were to get the requested increases in fiscal

1986, would still be some 500,000 below—this is active duty manpower—where it was in 1964 before the Vietnam buildup.

While we may not be perfect, I think we are making some progress in this particular area. I think we do a reasonably good job. Obviously, people talk about some of the abuses that happen in particular programs. When we hear about them, we go in and take corrective action.

I think it is important to keep in mind that we now have the best qualified officer and enlisted force we have ever had in the history of this country. That is not something that I would want to just jettison in the name of efficiency.

I would go very, very carefully before I would move to do something that would undermine that particular force which we have and which I think this committee, the Congress and the American people can be very proud of.

CHANGES IN RETIREMENT SYSTEM

Senator JOHNSTON. Do you agree with the Joint Chiefs who made a statement that appeared in this morning's paper to the effect that you cannot change that retirement system, you can't change it retrospectively because those guys already have a deal or contract; you cannot change it prospectively because that would create two classes of service?

It is a catch-22 situation

Dr. KORB. I agree you should not do anything that violates a contract that somebody has. Whether in fact that if a young man or young woman makes a decision to stay in the military for a certain level of retirement benefit, I think they ought to get it.

I think if you have people in the system now who have made their decisions on that basis, you ought to honor those commitments.

I see no problem if you start a system prospectively. For example, we have already done that. The Congress said that for people joining after September 1980 their retirement base would be their 3 highest years rather than the final highest pay. That is a reduction of 13 percent in the value of the retirement system.

I don't see it causing any problems in the force. If it has, nobody has brought it to my attention. I think you can do things prospectively provided you look not just at the retirement system, but the whole compensation system.

BUDGET COMMITTEE VOTE

Senator JOHNSTON. I would suggest that the administration ought to take a look at some of these things or else the Congress is probably going to do them in the wrong way.

I know you are familiar with what the Budget Committee has done by a vote, if I remember, of 13 to 4 to have zero real growth. In the meantime, we funded the MX missile, we had the hearing yesterday on SDI. It looks like every single penny of that is sacrosanct. You have to continue with the front-loaded weapons programs.

When it all comes down to it, they will be looking at your programs and yours will have less glamour. Indeed, the President has said we have to fully fund all the weapons programs, all the essential weapons programs, and that is going to leave the cuts in manpower.

I fear we are not going to be as intelligent as we might be if we had a comprehensive proposal from you for the Congress to consider.

Dr. KORB. Sir, I would like to make a point about that. If there is zero growth in the defense budget, I would not expect us to get approval for our active duty, reserve or civilian increases.

I find it hard to conceive of why if there is no growth in the budget, we have to take manpower reductions. If it is zero growth, we don't get our increase. But why do we have to go backwards?

That is the thing that I think troubles me. Now, can we do it if forced to?

Yes, we can do anything. Obviously, the more latitude we can get, we can do it more intelligently. I think that does not make sense to me. Zero growth, no, don't give us our increase. Why cut us drastically in the manpower area?

Senator JOHNSTON. I am reminded it was 18 to 4 in the Budget Committee, not 13 to 4. It shows you the sentiment.

Dr. KORB. I can understand that. If we have zero growth, don't give us our increases, but as far as I know, in no other areas are you taking away weapons systems from people or deactivating squadrons or tying up ships.

Senator JOHNSTON. What the Budget Committee has done is put that zero real growth overall in the armed services.

Dr. KORB. I understand that.

Senator JOHNSTON. Then they continue to increase the weapon programs as they must as the Congress decides in the case of MX or as they must in the case of ongoing programs like the B-1.

So what does that leave? It leaves Larry Korb.

Thank you, Mr. Chairman.

SAVINGS FROM CONTRACTING-OUT POLICIES

Senator STEVENS. I am reminded that I was going to ask you something and that is if you can give us a study which indicates the savings that you believe you are getting from contracting out?

I know up in my State there have been a series of functions of the Department that have been contracted out that were in-house, civilian employees in the Department. They performed the functions like maintaining power stations, maintaining mess halls, maintaining the DEW line. They were all contracted out. There were initial savings.

Now, as I watch those contracts, it seems to me that the cost of those contracted out functions far exceed the cost of what they would be if they were still being managed by the Department directly.

CONTRACTING-OUT FUNCTIONS

I would like to know whether you have had any ongoing oversight of contracted-out functions and how you watch that increased cost?

Second, you just mentioned to Senator Johnston that you feel there are some laws which prevent you from proper administration, meeting readiness goals at the lowest possible cost. That is how I interpreted what you said.

I would like to have a list of those laws. We can see how many we can suspend this year.

OVERSIGHT OF CONTRACTED OUT FUNCTIONS

The General Accounting Office, the DoD Inspector General, and the Services' Audit Agencies have conducted numerous audits of the A-76 program and generally have concluded that the savings we projected are being realized.

In addition, we reported to Congress last year on an analysis of 235 A-76 contracts awards during FY 1981 and FY 1982. The analysis showed that the overall savings resulting from the competitive process remained at approximately 30 percent after one or two years of contracting performance.

For each of the 235 contracts, we looked at the original cost comparison and the subsequent contract costs. We analyzed the reasons for contract increases and found that increases occurred for two basic reasons: wage increases based on Department of Labor wage surveys, and mission increases. Both of these reasons for contract cost increases would have applied to the in-house organization. Two of these contracts were at Alaskan commands and the results of our analysis showed that the savings to the government increased over our original projections.

Finally, we have recently added data elements to our A-76 data base to monitor subsequent years costs after completion of a cost comparison. In the future, these data elements will allow us to routinely follow this issue.

PROCUREMENT

Senator STEVENS. Senator McClure is next.

Senator McCLURE. Thank you very much, Mr. Chairman.

I was going to ask the same thing the chairman has just asked. I am very, very much mindful of the fact that Congress over the years has put an awful lot of restrictions on what the Pentagon can do. Sometimes they were very well motivated restrictions. Procurement is one.

Could you also point to us in that list of laws procurement requirements that prevent you from making efficiency changes in personnel in procurement?

Dr. KORB. I would be happy to, Senator.

Senator STEVENS. That was included in mine. I accept the specification.

Senator McCLURE. I thank the chairman.

I thank you, Dr. Korb.

There is not any other outfit in the world I know of that uses as many people to move as little as each individual does as is inherent in the distribution of material, particularly spare parts and supplies, as does the armed services. That is both military personnel and civilian personnel.

We need to take a very critical and careful look at our failure to be able to use more modern management techniques and more modern distribution and warehousing techniques that could allow us to lower our dependence on numbers of people.

Dr. KORB. One of the problems that we have had in this area, Senator, is what I would call the fact that we need up-front money to do it, what we call productivity enhancing capital investment, and because of problems in terms of budget ceiling, both the executive and legislative branches, it is very hard to get up-front money for long-term savings.

The same way with base closures. It costs you money to close bases. Unless you get the up-front money, you can never get the savings down the line.

ELIMINATION OF INVENTORIES

Senator McCLURE. We have gone through a period when we thought the Japanese had some kind of managerial genius that would back us off the mat in terms of competition. Indeed, they have done a tremendously effective job in enhancing their competitiveness.

One little management change that they have introduced which has now been introduced in perceptive U.S. corporations is getting the part to the place that it is needed at the last possible moment instead of building inventories so that you have plenty there.

You leave the inventory as lean as possible. You only get it where it is needed at the last possible moment.

I talked to one electronics manufacturer in the United States who said that change alone saved his company an estimated $100 million a year.

Dr. KORB. Senator, I could not agree with you more. I commissioned a study by the Logistics Management Institute which made that same point. Now we are trying to see if we can actually implement it.

Senator McCLURE. I suspect you will find that there are laws and rules and regulations telling you that you can't do that.

If you will help us, we will try to help you.

Dr. KORB. Thank you, sir.

DEFENSE BUDGET PERSONNEL COSTS

Senator McCLURE. In the U.S. defense budget personnel costs, that is pay and retirement pay, account for 44 percent of our defense spending.

The Soviet defense budget personnel costs account for only 10 percent.

Do you believe that we should try to reduce the percentage of U.S. defense spending devoted to personnel costs?

Dr. KORB. No, sir, I do not. I think if you take a look at the size of the Soviet Armed Forces and take a look at the size of ours, you will find that they have two and a half times more people on active duty, nine times as many people in the Selective Reserves and I wouldn't trade our soldiers, sailors, airmen, or marines for anybody else in the world.

I think the reason that the people we have are good is because we treat them right, we take care of their quality of life, and they are well motivated.

I think in the personnel area if you take a look at our personnel costs compared to major corporations, they are about average in terms of the percentage of the total budget.

We are proud of those people and we think they are entitled to a fair compensation.

COST COMPARISONS WITH MAJOR U.S. CORPORATIONS

Senator McClure. Will you repeat that statement because I have not heard that allegation made before, the statement you made that if you look at major U.S. corporations, our personnel costs——

Dr. Korb. In terms of the percentage of the overall budget, we compare to major corporations, right around the 40-percent level.

I might point out a couple of years ago in 1976 it was 56 percent of the budget.

Senator McClure. I understand that, but that has changed with major weapons procurement.

Dr. Korb. That is correct.

I also would point out in real terms military compensation has not grown since 1964.

Senator McClure. I recognize that, too.

Perhaps we should look at it in real terms. I think by your own studies you are way ahead of the comparability curve when you look at all of the fringe benefits and retirements, not just pay.

Dr. Korb. Again, the comparability standard is established in law. Comparability in law says——

Senator McClure. I am not asking you whether it is because of law or outside of law. The fact is the comparison.

Dr. Korb. In 1972 when we went to the voluntary military, the Gates Commission recommended military pay rates which they said should be sufficient to attract a force of 2.3 million people. Right now we are 7 percentage points below the rates established in 1972.

Senator McClure. I understand that, too.

There are various other factors involved in that. There are various other ways of making components of attractiveness. You have indicated you can't reduce the total, you can't reduce the percentage, you should not try to tinker with it very much in terms of personnel costs.

Dr. Korb, I am a little confused by that if, as a matter of fact, you believe there are efficiencies that we can apply.

Dr. Korb. What I am saying is that anything you do you have to do in a balanced manner. If we put aside the questions and the observations, very trenchant observations of Senator Rudman, about the force that we have, if you would assume that given the constraints under which we operate, that is the right size force, if you changed the people, then you must also change some other things.

If we have a ship, the ship is supposed to be manned and we don't have the people, then you have a problem. The two go together.

Senator McClure. I understand that.

You are giving me a very generalized response to a very specific question.

Dr. Korb. I understand that.

The other point I have pointed out in my discussions with Senator Rudman is if in fact we are allowed to do things which we have never been allowed to do before, yes, we can operate more efficiently.

DEFENSE LOGISTICS AGENCY

Senator McClure. Take the Defense Logistics Agency, 51,000 people.

Can you take 5 percent out of that or 10 percent?

Dr. Korb. I would say a better way to do it is to give those 51,000 people, whatever number, more to do by taking things from the Services.

In 1958 the Congress gave the Secretary of Defense the power to set up these particular agencies to bring about efficiencies. What has happened is there has been a move in Congress in the last couple of years——

Senator McClure. You sound just like Cap Weinberger, I can't use one person less than I have. I can't pay 1 cent less than I pay. You guys are going to wreck U.S. security if we tinker one bit with what we are doing so perfectly already.

Dr. Korb. I didn't say that. What you need to do is take a reduction in the service headquarters. You can get a net reduction of people.

Senator McClure. You can take them out of Air Force Communications Command?

Dr. Korb. That is correct.

Senator McClure. Logistics Command and Air Force Systems Command?

Dr. Korb. Which is what we tried to do in 1981, but we were stopped by the Congress.

Senator McClure. Help us find those places.

Dr. Korb. OK.

CONSIDER RESUMPTION OF DRAFT

Senator McClure. There are several approaches to personnel cost reductions. Shift from the All-Volunteer Force to the draft?

Dr. Korb. It would cost you money. Training costs would far exceed any reductions you would get and advertising costs.

Senator McClure. Reduce U.S. force structure?

Dr. Korb. Well, that is what I was talking about doing in a balanced way. If we have fewer divisions, ships, squadrons, yes, we could have fewer people.

Senator McClure. Relying more on Reserve forces where personnel costs are much, much lower?

Dr. Korb. That is what we are doing. Since I came into this job, we have increased Reserves by 250,000, active by 75,000.

MILITARY/CIVILIAN PAY SCALES

Senator McClure. What comparison between the total cost, not just pay, but total cost of the military personnel compared to a civilian counterpart doing the same job?

Dr. Korb. In terms of the total cost, the civilian is cheaper. That is why we try to civilianize some jobs. We try to contract out.

I have to go a hearing this afternoon in the House which is trying to restrict the number of jobs that we can contract out.

Senator **McClure**. I have just one other question, but let me make a parenthetical statement. Perhaps I am wrong. If I am, say so.

If it is cheaper to hire civilians than military, then isn't comparability out of whack?

Dr. **Korb**. Comparability should be to a standard. Federal civilian and military pay should not be compared. They are two different systems and have two different objectives.

Senator **McClure**. I will buy that.

Nevertheless, Congress has made them comparable.

Dr. **Korb**. Yes, sir. It is ridiculous because you are looking at two different objectives.

TAX ON MILITARY SPACE-AVAILABLE FLIGHTS

Senator **McClure**. It is not the first time that Congress has been ridiculous nor the last.

There is a proposal, and this will be my last question, Mr. Chairman, there is a proposal by IRS that any space-available flight on corporate aircraft will be a taxable benefit to the passenger.

If that were shifted to military, what would be the effect upon military personnel?

Dr. **Korb**. I think you would have severe problems. You put people going on emergency leaves on space-available seats. You have people that are taken away from home. If we had to conform to that law, I would ask for more money to give people a chance to go home.

Senator **McClure**. Let me suggest to you that you had better be concerned about that because IRS——

Dr. **Korb**. We are concerned about it.

Senator **McClure** [continuing]. Is bound and determined to find ways to tax fringe benefits and the military will not be exempted from that.

Dr. **Korb**. We understand, and we are in continuous dialog with IRS over a number of things.

Senator **McClure**. Thank you, Mr. Chairman.

Senator **Rudman** [presiding]. Senator Sasser.

Senator **Sasser**. Thank you, Mr. Chairman.

REDUCTION IN 18-YEAR-OLD MANPOWER POOL

Dr. Korb, as the military services modernize their forces, manpower requirements are increasing, but looking to the future, I am told that the pool of 18-year-olds is substantially declining. I think this decline in the 18-year-old manpower pool combined with what we hope is the probability that unemployment levels will continue to decline would indicate that the services may be facing a military manpower shortfall in the not too distant future.

How severe do you predict this shortfall will be in manpower?

Dr. **Korb**. Senator, the manpower pool started declining 6 years ago. 1979 was the peak. Despite the decline every year, our manpower position has improved.

I think if we have a fair and competitive compensation system, if we are allowed to have our recruiting and advertising budget to keep level with inflation and there remains a sense of patriotism in the country, we won't have any problem dealing with this particular situation.

I might add parenthetically the Congress has made my job much easier because in the last 2 years we basically have obtained one out of every three additional active duty people we have requested, and the Army, which is the service which has the most difficulty recruiting, has basically remained level since 1980.

Senator **SASSER**. As far as you are concerned, these trends don't indicate that we are going to have to look at the draft at any time in the near future?

Dr. **KORB**. We are much farther away from having to consider that than we were 4 years ago. Nobody in my office thinks we even have to consider anything like that.

Our manpower problems can be solved provided the things I mentioned are given to us.

IMPROVED GUARD AND RESERVE FORCES

Senator **SASSER**. The Department of Defense has embraced the total force concept which recognizes the need for improved Guard and Reserve components. I am a booster of the Guard and Reserve. It appears to me that they do not receive a share of the defense budget which is commensurate with their responsibilities in the total force.

If we are going to continue with this All-Volunteer concept, it appears to me that we need to be doing more over at the Guard and our Reserves.

Do you see the Guard and Reserve personnel, which I think are a good cost-efficient dollar buy, man for man or woman for woman, playing an increasing role in the force structure of the Armed Services in the coming year?

Dr. **KORB**. Yes, our plan envisions growth over the decade of the 1980s of four Guard and Reserve for every active duty person. We are already doing that.

Since you mentioned getting a fair share, you have to be very careful. When people make that particular assertion, they are looking at one program category which is Guard and Reserve. That is only direct cost.

A Reserve patrol plane flying a mission on a weekend is backed up by active duty intelligence. If facilities are constructed at active duty bases, the Guard gets to use them. One has to be very, very careful.

If you take a look at the situation that the Guard had when this administration came in office and where they are now, they are light years ahead. There will be an increasing dependence on them, as you mention, primarily for financial reasons.

INCREASES IN ARMY OFFICER CORPS

Senator **SASSER**. The Army is projecting no manpower growth for the active service in fiscal year 1986, but in reviewing the budget justification in the Military Construction Subcommittee, and I am ranking member of that subcommittee, there was substantial growth planned in the officer corps of the Army over the next several years.

For instance, and looking at the Form 1390, we saw that at Fort Bragg the Army is projected to lose 1,000 enlisted slots over the next 5 years, but at the same time the Army is projecting a 1,200 increase in the number of officers at Fort Bragg.

That is also true at Fort Sam Houston, Fort Campbell, Fort Lewis, Fort Meade, Fort Riley, Fort Belvoir, Fort Leonard Wood, Fort Bliss, Fort Jackson, Fort Levenworth, and Fort Sill.

So, it appears that while the Army is planning no overall manpower growth, when you peel back the justifications, it seems that this thing is being accomplished by reducing enlisted personnel to make way for more officers, which, obviously, are more expensive.

Of course, the military has been subject to the accusation over the years to being top heavy, too many officers and some people pass around statistics that we have that we have one-fourth as many ships as in World II, yet we have four times as many admirals and why is that?

What is the justification for the increase, substantial increase, it appears to me, in officer slots in the Army while we see apparently a commensurate reduction in enlisted slots?

Dr. KORB. First of all, going into the fiscal year the Army was short by 3,100 officers and those 1,200 are to go to make up that deficiency.

The enlisted slots are being reduced primarily through things that this committee has talked about, things like civilianizations of administrative jobs, through force modernization.

MANNING OF PERSHING MISSILE SYSTEMS

If you take a look, for example, at the number of people who have to man a Pershing I as opposed to a Pershing II, the number of enlisted people drops substantially.

Senator SASSER. Does the number of officer personnel go up?

Dr. KORB. The number of officer personnel stays the same. The enlisted troops——

Senator SASSER. You are talking about manning Pershing II as opposed to Pershing I?

Dr. KORB. That is correct.

Senator SASSER. The manpower requirement goes down?

Dr. KORB. That is right.

Senator SASSER. Both in officer——

Dr. KORB. And enlisted, but they go down further in enlisted. We have civilianized a lot of jobs. I think the Army ought to be given a lot of credit. They are basically within a stable manpower level increasing their force structure.

They studied a lot of the support jobs and found out they were not needed.

Senator RUDMAN. Will you repeat that last line? They found out what?

Dr. KORB. A lot of support jobs they found were not needed.

Senator RUDMAN. I did not mean to interrupt, Senator Sasser, but he is singing my song.

Dr. KORB. They have also transferred a lot of the combat Service support, combat support, to the Reserve structure. That is the reason for it.

Senator **Sasser**. Let me ask a more local question here, from my point of view.

DOD manpower requirement reports that for fiscal year 1986 the following statement was made with regard to the 101st Airborne or Air Assault Division at Fort Campbell. It says: "The Airborne Division will be restructured to a smaller size."

What is meant by that statement?

You know that division is headquartered mostly in my State. I am curious as to what that means.

Dr. **Korb**. What they are doing is that the Army is reducing the size of the 101st and all its other divisions based on the 1983 Army's excellent study of the whole force structure.

They decided as a result of this study that they could transfer from division to corps control certain parts of the division—and in effect that gives them more flexibility—to the corps commander under their new air/land battle concept.

In other words, this is going along with what Senator Rudman was talking about. You can get the same amount of fire power with reducing the size by transferring certain assets from the division to the corps level.

PAPER ON RESTRUCTURING OF 101ST AIRBORNE

Senator **Sasser**. Would you be good enough to provide me with a detailed information paper on the impact of this restructuring on this particular unit?

Dr. **Korb**. Yes. The 101st is being reduced from a structure of a little over 19,000 to 15,600 by transferring personnel finance companies to the corps control and by reductions in both combat and support units organic to the division.

We will give you the whole nine yards if you want it.

Senator **Sasser**. I would like to get the whole 9 yards because I am sure there will be a lot of inquiries being directed to me in the coming weeks and months about that particular matter.

Mr. Chairman, I have some additional questions that I will submit for the record.

Senator **Rudman**. Very well.

[The information follows:]

Restructuring of 101st Airborne Division

The details of the impact of the redesign of the 101st Air Assault Division are being developed by FORSCOM as part of their concept plan for implementing the redesign. When this plan is published, detailed information can be provided. General information follows:

From FY 85 to FY 87 the 101st's authorized strength will decrease from 17,100 to 15,600. One helicopter battalion organic to the redesigned 101st will be stationed at Ft. Rucker, to provide school support, thus the authorized strength of the 101st at Ft. Campbell, KY will be 15,300.

Some of the units in the 101st will be redesignated as nondivisional units but will remain at Ft. Campbell. Those units include:

Medium Helicopter Company	201
Adjutant General Company	109
Finance Support Center	90
Total	400

Therefore, the reduction in previous 101st authorizations at Ft. Campbell attributable to the redesign is approximately 1,400. The estimated total authorization strengths of all units at Ft. Campbell, divisional and nondivisional, will decrease from 22,639 in FY 85 to 21,187 in FY 87.

The total issue of stationing is being considered by the Army Staff and the Army leadership in light of all force modernization initiatives. The situation at Fort Campbell is being studied to make the best possible use of post capabilities and scarce resources there and throughout the Army.

REEVALUATION OF PERSONNEL COSTS

Senator Rudman. Senator Kasten.

Senator Kasten. Today we are addressing both the military force posture and overwhelming Federal budget deficit now projected to be over $200 billion. It is clear, and I think it should be clear from the questions of the committee, that the amount we are spending on defense has got to be reevaluated.

I think one of the questions will be in your area. I associate myself with the comments of Senator Rudman and Senator McClure, Senator Sasser and others as we look toward dealing with your area in manpower and personnel.

DEFENSE FREEZE

As you know, the question of the defense freeze is being discussed as we come to terms with deficit reductions. One of the problems with the freeze is that if it is not done correctly, a freeze in fact could cost the United States more money in the long run.

I think the proposal which Senator Rudman is bringing up is a judicious one. First, it denies a requested increase of 36,000 personnel in military and civilian manpower.

Second, it imposes a reduction of 10 percent to existing civilian and military support personnel.

These reductions would save over $4.5 billion in 1986, more than $16 billion in 1987 through 1988. By this one action we would see a reduction in the Federal deficit of close to 10 percent.

SENIOR AND FIELD GRADE OFFICERS IN MILITARY

In addition to the proposal that Senator Rudman and others are working on, I think there are other areas where funds could also be reduced. One that is apparent to me and has been discussed a little bit here his morning is the number of senior and field grade officers in the military.

The following example, I hope, will give you an idea and you may be familiar with some of these statistics.

There are six times as many three and four star generals and admirals for every enlisted serviceman today as we had in World War II. There are 140 major generals in the Army, although the Army has only 17 commands and a handful of operational commands for that rank. There are 100 times as many captains in the Navy as there are seaborne commands for that rank.

In terms of the ratio of officers to enlisted men, there are six times as many lieutenant colonels and commanders and colonels and captains as there were in 1945.

I believe that real reductions can be sustained in the Department of Defense to support bureaucracy and the high ranking bureaucracy without affecting our combat capability or readiness.

This is one simple way we can reduce the defense budget. I think it is clear to everyone that defense must play a key role in our effort to reduce the Federal deficit.

From the examples I have mentioned in my statement, it is obvious that there are too many chiefs and not enough Indians. We have too many officers and not enough enlisted men. We are not going to have more enlisted men, we recognize that, but we have to put controls on the senior field grade officers.

I want to ask you two things.

JUSTIFICATION FOR CURRENT MILITARY STRUCTURE

No. 1, why has this situation evolved since World War II and how can you justify the current military organizational structure?

Dr. KORB. First of all, if you compare peacetime to wartime, you are not going to get, I think, a valid comparison. What you ought to do if you want to make those comparisons is compare the force that existed after World War II, between the end of World War II and the Korean war. And I think you will find we stack up quite favorably.

I also point out that Congress working with the Department of Defense in 1980 developed what we called DOPMA, Defense Officer Personnel Management Act, by which we justified the force structure. It was justified and blessed by the Congress.

This is not just something that has been done capriciously. We have submitted legislation to the Congress. We submitted in 1981 a comprehensive bill to manage flag and general officers, and that proposal was never acted on by the Congress.

I think if you take a look at our force structure compared to our Allies, compared to our adversaries in terms of officers or field grade officers or generals and admirals, we stack up quite favorably.

As a matter of fact, there is only one country in the world that has anywhere near the small proportion of generals and admirals that we have, and that is West Germany. If you compare us to Great Britain, the ANZUS countries, or Canada or our other NATO Allies, you find out on a proportional basis we do much better.

Senator KASTEN. You are saying to me, No. 1, the number of officers and particularly field officers we have is just right and the reason we had only one-sixth as many before is that it was because we were at war?

Dr. KORB. I would say this. You can't compare a peacetime structure to a wartime structure. In a wartime you expand the base, you can bring in people very rapidly. You can bring in privates and seamen. You don't bring in captains and majors.

We would not expect that the number of field grade officers—generals and admirals—to expand proportionately. I think a more apt comparison is not a peacetime structure and World War II. It is a peacetime structure that existed right before or right after World War II.

PYRAMID STRUCTURE

Senator **Kasten**. Right now we have a lot of people at the top. We don't have the kind of pyramid structure that we traditionally have had.

If we were to return more toward the kind of pyramid structure, wouldn't we obtain better management control of our military force structure rather than spread out with all these different review groups and consultation groups and officers and bureaucrats and bureaucracies?

Dr. **Korb**. Again, when we say we used to have, I don't know when used to was. My study tells me before World War II and after World War II we were about the same as we are now. We were different in the war, obviously, because you expanded your enlisted base dramatically.

I also point out to you that the world which we deal with compared to the period between the end of World War II, start of the Korean war, is vastly different. We have military people, for example, in international organizations that have sprung up that require assignment of flag and general officers.

What you ought to compare us to is peacetime to peacetime and compare us with the other people we do business with. Except for West Germany, which is the only one that has a lower proportion than we do, we do very well.

Sure, we can always do better. We went through this with the Congress in great detail and we set up a Defense Officer Personnel Management Act in which in fact we justified the structure we have today. If we want to open that thing up again, fine, I will be more than happy to, but this is not some capricious thing where we have a bunch of people over there just letting the number of field grade officers, generals and admirals, grow willy-nilly.

This is all justified and documented for the Congress.

STATUS QUO

Senator **Kasten**. Dr. Korb, let me just say I have some other questions I will supply for the record, but in your response to Senator Rudman and your response to Senator McClure and your response to other members you simply act as if the status quo is not only acceptable, but the status quo is fine and you are going to fight for the status quo.

Dr. **Korb**. No.

Senator **Kasten**. There are people on the subcommittee who are not satisfied with the status quo. There are people on the subcommittee who believe we ought to make changes. There are people on the subcommittee who respect the work of a number of members of the subcommittee trying to get at these basic questions and problems.

We are going to work with you, I hope, but against you, if necessary, in order to make the kind of changes that we believe have to be made.

Thank you, Mr. Chairman.

Dr. **Korb**. I don't think in my response to Senator Rudman's question I disagreed with him. I said we had a basic agreement.

The problem is, for example, this afternoon when I leave here, I have to go and testify before the House which does not like the jobs that we are studying to eliminate from Government. These jobs are in what we call core logistics areas.

So, if they won't let me study them to get rid of them, how am I going to reduce them? That is the point I am trying to make.

Senator **Rudman**. I think the problem is that you and I have had discussions publicly and privately and it does get to be the general impression because of the importance of what I would call the negotiating stance of the Secretary of Defense, which I understand, that nothing can be done. I don't think that is your position.

On the other hand, I would say that not everything that is wrong with DOD manning can you blame on the Congress. You can blame some of it, but not all of it.

Dr. **Korb**. I wouldn't say that. What I would say is that you have to take a look at these things in context.

You also have to keep a balance. If this country decides it cannot afford a Navy of a certain size or an Air Force or an Army because we have problems, what we don't need is a return to the practices that were there when I came into this job, when you ran for office, in fact, when we had very severe readiness problems.

That is the thing we have to guard against.

READINESS PROBLEMS

Senator **Rudman**. Let me suggest to you one of the reasons we might have had some of those readiness problems. We had then and have now too many slots being occupied in some of these agencies which I know you would like to change and not enough of those slots out in the divisions.

I think the Army is a great example. They have created two new light divisions without changing end strength. The way they did that quite simply was to pull people out of support that, as you have correctly stated, General Wickham and his staff felt they could do without.

My concern is that we can do without a lot more of these support forces if it is done carefully. I don't think anyone here in the Senate has the expertise and knowledge to macromanage how those cuts will be made.

It seems to me if you have 55 or 59,000 people in the Air Force Systems Command and if the Air Force needs 7,000 more people in the field, you ought to be able to free some slots out of the command to do it. That is where the disagreement is. We think you ought to do it.

Senator McClure.

Senator **McClure**. Thank you very much, Mr. Chairman.

I think our frustration lies in two directions.

One is that there are efficiencies we would like to help you achieve and if Congress is standing in the way of that, we want to know where and what we can do to remove the blockades to increasing the efficiencies.

The second is just the hard choice that we are going to have to make in this Congress as to where the dollars will be spent.

I don't expect you to come up here and tell us that the requests you have made are invalid requests.

I expect you will come up here and tell us under the circumstances, under the laws, under the force structure that is appropriate and has been determined by the administration, those are the correct requests. I understand that.

A moment ago you said something that I want to follow up on because I think a lot of people in the country don't understand it.

BUDGET FREEZE

You are saying we can live with a freeze, but a freeze doesn't mean that personnel costs are going to get the same dollars they got before. You said please don't cut us back.

Dr. **Korb**. What I am questioning is the logic of saying that a freeze, which means basically you continue at the same level you are, means that you have to cut personnel, because our budget this year calls for 6 percent real increase. We ask for an increase in total people of considerably below that.

Senator **McClure**. What I am trying to bring out is not just what it does in those terms. The difference between a real increase and the status quo is that a freeze means a freeze for the defense budget, not for the personnel segment of the defense budget.

Dr. **Korb**. I understand that.

Senator **McClure**. I know we are going to have some argument about what the trade-off should be.

Dr. **Korb**. My point is that whatever we do to the budget, we have to do in a balanced manner.

Senator **McClure**. I understand that. I don't object to that, except that Congress is going to make some judgments on what that balance is.

Dr. **Korb**. I agree. That is my opinion of what the balance should be.

MX AND MAINTENANCE PERSONNEL

Senator **McClure**. Should we cut the MX and maintenance personnel?

Dr. **Korb**. All I would say is if you give us a weapon system, whatever it is, give us the people to maintain it.

Senator **McClure**. I did not ask you that question. That is the question we have to answer. You are going to give us your views.

You want us to cut the B-1 bomber and keep the personnel?

Dr. **Korb**. No. I said whatever number of B-1 bombers you give us, give us the people to operate and maintain them.

Senator **McClure**. If we have to spend the money for the MX which the Congress has voted under the urging of the President, that does not take nearly as many dollars to manage as it does to build it?

Dr. **Korb**. That is correct.

Senator **McClure**. That is the tradeoff and there is a reduction in personnel; is that not correct?

You have a static level of dollars for total defense spending?

Dr. **Korb**. What I am saying is whatever number——

Senator McClure. What I am saying is you told us you would give us your views. You tell us don't cut personnel.

Dr. Korb. I didn't say that.

Senator McClure. What did you say?

Dr. Korb. I said don't cut personnel and give us the weapon systems.

Senator McClure. We should match personnel to the weapon? If we have to cut personnel costs, cut them somewhere else?

Dr. Korb. If you have to cut personnel costs, only cut them in a proportion that you deal with the others.

Senator McClure. Let us assume that the current proportions in personnel are exactly correct.

Dr. Korb. That is correct.

Senator McClure. Do you think it is correct?

Dr. Korb. I would say given the environment in which we operate and given the situation I inherited, it is reasonably correct.

Senator McClure. OK, I accept that.

It also says because it is reasonably correct, there will be some judgments applied.

Dr. Korb. That is correct.

Senator McClure. Yours and ours.

Dr. Korb. That is correct.

Senator McClure. I appreciate your advice. I don't want to quarrel with you about it. You know we have some problems.

Dr. Korb. I understand that.

INCREASES IN WEAPON SYSTEMS

Senator McClure. It is likely that Congress is going to increase weapon systems and do so under a freeze of military spending. If that is so, something has to give.

Dr. Korb. Remember, Senator, these people that we are requesting this year are to support weapon systems that were authorized a couple of years ago.

Senator McClure. I understand that. If that means we are going to have the weapons and you are telling us if we have the weapons, give us people to manage them, that also means you will have to find some other place to reduce. You can't have it both ways. It is not going to work that way this year, whether we desire it or not.

The second point in the same context, the American public doesn't understand this terminology when we talk about freeze because a freeze does not keep the status quo. We are dealing with something much more dynamic than simply being able to say status quo ante, status quo present.

A freeze on entitlements programs, according to Dave Stockman's budget book, will increase spending for entitlements programs by 25 percent over 3 years. If we have that kind of freeze, that shifts this large segment of our budget into a 25-percent increase in outlays, then something frozen is going to be reduced.

We have to understand what some of this terminology means when we talk about freezes. Right now we have freezes that don't mean what the public believes them to mean and a freeze in the defense budget is a freeze not on absolute current dollar levels on every subprogram. There will be shifts.

Your job is first to help prepare a budget for the force structure, a balance within the Defense Department, and present that to the Congress and defend it.

What I am asking you to do is to take the next step that says recognizing that your wisdom is perfect and ours is not, we are going to do something foolish and cut something that you don't want cut. Help us be as little foolish as possible by helping us determine where those cuts should be.

Thank you, Mr. Chairman.

Senator **Rudman**. Senator Sasser—I have one or two other questions—do you have some other questions?

Senator **Sasser**. I have one quick question.

Senator **Rudman**. Go ahead.

TWO NEW ARMY LIGHT DIVISIONS

Senator **Sasser**. Dr. Korb, we are talking about the process of creating two new Army light divisions. I was just looking here at the figures you gave me with regard to the 101st Airborne Division at Fort Campbell.

You are cutting the strength of that division from 19,000 down to 15,600.

Dr. **Korb**. That is correct.

Senator **Sasser**. You are maintaining a static end strength of the Army.

Aren't you really just stripping personnel out of the 16 divisions that are already in place and putting them into 2 new light Army divisions and saying, aha, we have 2 new divisions here? We moved up from 16 divisions to 18 divisions, but we really have not increased our combat manpower capability.

Have we,

Dr. **Korb**. Yes; we have.

Senator **Sasser**. Explain that to me.

Dr. **Korb**. Reductions are coming basically from the division support command.

I also might point out something which has been overlooked here. Those two new divisions will be one-third Reserve. So, it is not all active. What you have basically done, as Senator Rudman has given us credit for, is reduced the support portion of the overall Army to create more combat.

Senator **Sasser**. So, just two-thirds of the two new divisions is going to be ready: in other words, you are going to have one-third of these new light divisions to be made up of Reserve components?

Dr. **Korb**. Yes; the Reserve, as you pointed out, if we give them the resources, can be fully ready.

You know, we have round-out brigades in lots of our active divisions already.

MOBILIZATION OF LIGHT DIVISIONS

Senator **Sasser**. How long would it take you to mobilize the one-third Reserve components of the two new light divisions?

Dr. **Korb**. Again, I would say they will be mobilized at the same time the active need to be mobilized according to the war plans. If they can't be, they won't be in there.

Senator **Sasser**. If it was decided we were going to ship out one of these new light infantry divisions to Alaska, if something happened on the rim of the Pacific and we decided we were going to ship that thing out tomorrow morning, it was in place, where are you going to get the remainder of the one-third of that light Army division when it starts to move?

Dr. **Korb**. I don't think they have decided which Guard unit. I think somewhere in Oregon. I don't know exactly which ones. That decision is a couple of years away in terms of getting that particular division up to strength.

Under the whole concept of the total force, you don't give a mission to the Reserves that they can't carry out. If, in fact, you want that division to be able to move tomorrow morning in total, that Reserve division has to be able to move at that particular time.

If it can't then you can't have that division in total move at that particular time. You can, obviously, move a brigade, for example, rather than a whole division.

Senator **Sasser**. I don't want us to become victims of our own propaganda here and find at the 11th hour we have two or three or four hollow divisions sitting around.

Dr. **Korb**. I agree with you.

Senator **Sasser**. We have a division on paper, but we don't have the manpower there to fully flesh out the division.

Dr. **Korb**. I agree with you.

Senator **Sasser**. Perhaps the chairman knew this. This is the first time I have heard you would have one-third Reserve capability.

Dr. **Korb**. Again, this is nothing new. For example, we have divisions that are going to deploy to Europe, Reserves, within 10 days, according to some of the commitments we have made to NATO.

Senator **Rudman**. I say to my friends from Tennessee I believe we do have here and we will make sure the staff supplies you with a copy of their plan.

When the units are designated, they will be fully combat ready, they will be prioritized in terms of equipment so if in Europe or Alaska a unit would have to be activated, it would have to be activated within the parameters that the airlift could take it where is is going.

We have a lot of information here on the Army on that. We will make sure that you get it.

Senator **Sasser**. Thank you very much. I would like to get that.

Senator **Rudman**. The only question I have is a followup on the discussion with Senator McClure.

AIR FORCE PERSONNEL IN MISSILE DEFENSE UNITS

I'd like to talk about this personnel thing for one more agonizing moment, Dr. Korb. If in fact the Air Force, to take an example, found that it needed 5,000 more people in one of its missile defense units and we froze the end strength at this point, obviously, they would have the choice of going into either logistics command, system command or communications command. They have somewhere in the vicinity of 90,000 to 95,000 uniformed people. Say we are going to make a calculated judgment here and we are going to take people, retrain them and transfer those slots from support to the field.

That, obviously, is the option that the Chief of Staff of the Air Force would be faced with, is it not?

Dr. KORB. Either that or not fully manning the missile crews.

Senator RUDMAN. One of the two.

If the national security requirement was that those missile crews be manned at 100 percent strength, obviously, you would take it out of logistics?

Dr. KORB. I think what you would probably do is you would get people who have sort of been relieved of missile command for a while to go to school and pull them back and then begin retraining.

Senator RUDMAN. That is exactly in fact what has happened in the Services over the years when there have been needs for ramping up quickly in terms of combat strength.

In fact, in terms of mobilization plans, some of the people who hold administrative positions, but have substantial combat training, either as air crews, infantry overseas or artillery officers would in fact be moved out in the field precisely for that; isn't that correct.

Dr. KORB. That is correct.

Senator RUDMAN. Dr. Korb, I want to thank you for you testimony this morning. You have been very helpful. I think we understand your institutional loyalty. I think we also understand the guy you work for is not too anxious to give anything publicly yet. You are in a tough position.

We think we can work something out with you before this is over.

Dr. KORB. If I may make a final comment, I have to compliment you for your raising this issue because we used to hold these hearings in a phone booth. As you can see, we have quite a crowd today.

Senator RUDMAN. This issue has drawn a great deal of attention. I suspect it is only the beginning, Dr. Korb.

Thank you.

SUBMITTED QUESTIONS

The committee has additional questions which we will submit for your response.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

ADDITIONAL COMMITTEE QUESTIONS

MANPOWER REDUCTIONS

QUESTION: DoD and Service officials have indicated that without a 3% July pay raise significant numbers of military personnel would leave the services.

Please explain the supporting data used to arrive at these conclusions. Provide for the record, by Service, the numbers of enlisted and officer personnel projected to separate as a result of denial of the 3% July military pay raise and when these separations are expected to occur.

ANSWER: Research over the last fifteen years, conducted by economists from Rand, the Center for Naval Analyses, private contractors, and others, has provided overwhelming evidence of the effect of military pay on recruiting and retention. The methods employed by these studies have, generally, been similar. A theoretical structure of how individuals make decisions to enter or remain in military service is formulated, which in turn suggests the measurable factors that influence individual's decisions. Then, using econometric and statistical techniques, the variation in these measurable factors is related to the actual data on recruiting and retention, in order to estimate the influence each of the factors has on recruiting or retention.

In almost all of these studies pay has been found to have both an economically and statistically significant effect on recruiting and retention decisions. Estimates of the effect of pay vary, however. A one percent increase in military pay has been estimated to increase the number of high quality recruits entering the Services by one to three percent; to increase the first term reenlistment rate by two to three percent, and to increase the second term reenlistment rate by about one percent, for example.

Though there has been work on both the enlisted and officer force, most research has concentrated on the enlisted forces. Using one model, the Annualized Cost of Leaving (ACOL) model, it is estimated that denial of the 3% pay raise on July 1, 1985 would result in an enlisted career force in the Army that is 13,000 less, in the Navy that is 8,500 less, in the Marine Corps that is 3,400 less, and in the Air Force that is 5,500 less, in FY 1990, than the size of the career force otherwise would be. These estimates assume a pay freeze in FY 1986, but pay raises that match civilian wage growth thereafter.

These are the estimates of one particular model. Other models will provide estimates that differ, but that are generally of the same order-of-magnitude. We do not have estimates of the effect of the 3% pay raise on the officer force at this time, though there have been a number of studies providing evidence of the effect of pay on officer retention.

IMPACT OF THREE PERCENT PAY RAISE DENIAL

QUESTION: What are the numbers of enlisted non-accessions, by service, as a result of denial of the requested three percent July 1985 pay raise?

ANSWER: We have postulated two scenarios to analyze in response to this question. They are:

1. No July 1985 pay raise - three percent January 1986 pay raise - comparable pay increases for 1987 and beyond
2. No July 1985 pay raise - no January 1986 pay raise - comparable pay increases for 1987 and beyond

These scenarios were compared against a baseline pay alternative defined by a three percent pay raise in July 1985, no Fiscal Year 1986 pay raise, and comparable pay increase in Fiscal Years 1987 and beyond. The analysis was performed using the Enlisted Supply Projection (ESP) time-series cross-sectional model. Shown below is the estimated reduction in high-quality male new contracts (AFQT Category I-IIIa HSDGs) for both scenarios by service by year.

SCENARIO 1

			FISCAL YEAR (in thousands)			
Service	1985	1986	1987	1988	1989	1990
Army	.8	0.7				
Navy	.4	.6				
Marine Corps	.2	.2				
Air Force	.6	0.6				
DoD Total	2.0	2.1				

SCENARIO 2

Service	1985	1986	1987	1988	1989	1990
Army	.8	3.0	3.0	3.0	3.0	3.0
Navy	.4	2.4	2.4	2.4	2.4	2.4
Marine Corps	.2	1.0	1.0	1.0	1.0	1.0
Air Force	.6	2.5	2.5	2.5	2.5	2.5
DoD Total	2.0	8.9	8.9	8.9	8.9	8.9

Scenario 1 represents a 1.7 percent decrease in high quality recruits for all Services. Scenario 2 results in a 6.4 percent decrease. It is clear that adopting a policy that further erodes the value of military pay will significantly impact on the Services ability to attract high quality recruits.

NEW GI BILL

QUESTION: Your FY 1986 request of $215.9 million for the new GI Bill is based on DoD actuarial estimates. How confident are you with these estimates?

ANSWER: The FY 1986 request of $215.9 million was an early estimate by the services. Since that time, the services have provided new data which will be provided to the Education Benefits Fund Board of Actuaries at their meeting in May, 1985. The Board will use the new data to calculate normal costs for this system. However, it must be stressed that this is a new program and no previous data are available on which to develop cost estimates.

QUESTION: Do you expect DoD to come back in FY 86 requesting additional funding?

ANSWER: In FY 86 we will have begun to collect real data. We do expect that the estimate may be revised. However, it is unclear whether the estimate will be revised upward or downward.

QUESTION: Your statement mentions a request for legislative changes to the new GI Bill to ensure that the program meets the Defense Department's recruiting and retention needs. Please provide an explanation of these changes and their projected cost in FY 85 and FY 86.

ANSWER: The following package of legislative changes has been proposed: 1) one time refund of the basic benefit contribution, 2) allow the service member with a three or more year enlistment up to eight months to decide not to participate in the program, and the service member with a less than three year enlistment up to four months to make the decision, and 3) change the member's contribution schedule from $100 a month for 12 months to $60 a month for 20 months.

It is estimated that the cost of the refund could be $20 to $40 million dollars per year. However this is refunding the member's own money without any interest. It can be assumed that this cost would be offset by not paying benefits to members who request the refund.

Allowing the member more time to make a participation decision will have an end result of reducing the demand for refunds. The cost estimate for this change would be highly speculative.

Extending the payment schedule may result in increasing the participation rate. A rate increase of one percent would result in a steady state cost increase in the basic benefit of $2 million dollars. As you know, the cost estimate of any new program that depends heavily on how individuals respond, such as the new GI Bill, is subject to a large degree of uncertainty. These estimates are no exception.

CIVILIAN PERSONNEL

QUESTION: Provide a break out of the civilian personnel request tracking from the FY 1985 Appropriated Amount (civilian personnel dollars only) to the FY 1985 Current Estimate and then to the FY 1986 Budget Request, highlighting the annualization of the FY 1984 pay raise, the annualization of the FY 1985 3.5% pay raise, the FY 1986 5% pay reduction and any increase or decrease in civilian end strength/ workyears by active appropriation.

ANSWER: The following is the requested breakout for the active operation and maintenance (O&M) appropriations and the industrial fund accounts for direct hire civilian employees.

(TOA in Thousands)

Army	O&M	Industrial Fund
FY 1985 Appropriated	5,056,962	1,998,797
FY 1984 Pay Raise for .5%	+23,314	+9,320
FY 1985 End Strength, Workyear, Pricing Adjustments	-12,506	-132,884
FY 1985 Pay Raise for 3.5%	+131,164	+39,766
FY 1885 Current Estimate	5,198,934	1,914,999

CIVILIAN PERSONNEL

	O&M	Industrial Fund
Annualization of FY 1985 Pay Raise	+39,575	+6,232
FY 1986 End Strength, Workyear, Pricing Adjustments	+208,459	-285,624
FY 1986 Pay Reduction for 5%	-195,685	-66,707
FY 1986 Request	5,251,283	1,568,900
Navy		
FY 1985 Appropriated	3,212,049	5,513,359
FY 1984 Pay Raise for .5%	+15,152	+27,700
FY 1985 End Strength, Workyear, Pricing Adjustments	+14,994	-16,467
FY 1985 Pay Raise for 3.5%	+77,236	+112,700
FY 1985 Current Estimate	3,319,431	5,637,292
Annualization of FY 1985 Pay Raise	+37,624	+110,174
FY 1986 End Strength, Workyear, Pricing Adjustments	+62,766	-45,230
FY 1986 Pay Reduction for 5%	-120,050	-232,400
FY 1986 Request	3,299,771	5,469,836
Marine Corps		
FY 1985 Appropriated	401,613	37,913
FY 1984 Pay Raise for .5%	+1,897	+215
FY 1985 End Strength, Workyear, Pricing Adjustments	+2,064	+2,451
FY 1985 Pay Raise for 3.5%	+8,666	+1,085
FY 1985 Current Estimate	414,240	41,664
Annualization of FY 1985 Pay Raise	+5,275	+472
FY 1986 End Strength, Workyear, Pricing Adjustments	+10,997	-28
FY 1986 Pay Reduction for 5%	-15,360	-1,800
FY 1986 Request	415,152	40,308
Air Force		
FY 1985 Appropriated	3,756,779	1,335,121
FY 1984 Pay Raise for .5%	+15,234	+3,086
FY 1985 End Strength, Workyear, Pricing Adjustments	+13,351	
FY 1985 Pay Raise for 3.5%	+89,810	+26,333
FY 1985 Current	3,875,174	1,364,540
Annualization of FY 1985 Pay Raise	+111,007	+35,106
FY 1986 End Strength, Workyear, Pricing Adjustments	+55,448	+16,276
FY 1986 Pay Reduction for 5%	-144,900	-59,602
FY 1986 Request	3,896,729	1,356,320
Defense Agencies		
FY 1985 Appropriated	3,148,627	
FY 1984 Pay Raise for .5%	+12,110	

CIVILIAN PERSONNEL

	O&M	Industrial Fund
FY 1985 End Strength, Workyear, Pricing Adjustments	+23,546	
FY 1985 Pay Raise for 3.5%	+75,289	
FY 1985 Current	3,259,572	
Annualization of FY 1985 Pay Raise	+42,478	
FY 1986 End Strength, Workyear, Pricing Adjustments	+108,713	
FY 1986 Pay Reduction for 5%	-122,905	
FY 1986 Request	3,287,858	
Total		
FY 1985 Appropriated	15,576,030	8,885,190
FY 1984 Pay Raise for .5%	+67,707	+40,321
FY 1985 End Strength, Workyear, Pricing Adjustments	+41,449	-146,900
FY 1985 Pay Raise for 3.5%	+382,165	+179,884
FY 1985 Current	16,067,351	8,958,495
Annualization of FY 1985 Pay Raise	+235,959	+151,984
FY 1986 End Strength, Workyear, Pricing Adjustments	+446,383	-314,606
FY 1986 Pay Reduction for 5%	-598,900	-360,509
FY 1986 Request	16,150,793	8,435,364

The FY 1985 appropriated amounts include the annualization of the 3.5% FY 1984 pay raise. As is the normal practice, the industrial fund FY 1985 pay raise of 3.5% was originally included in the FY 1985 request as part of the rate stabilization budgeting practice for the industrial activities.

FLAG AND GENERAL OFFICER MANAGEMENT

QUESTION: Please describe legislation resubmitted by the Department of Defense to establish a comprehensive framework for managing flag and general officer requirements. Does this mean you want to increase these officers?

ANSWER: The purpose of the legislation is to provide a standardized management system which will be responsive to the needs of the Department and the desires of Congress. There are four basic features in the legislation:

a. Six separate categories are established to account for and manage our requirements for general and flag officers. The categories are based on the nature of the activities in which the officers would be involved.

1. The Service Specific category includes all requirements within a specific military service that contribute to the daily operation of the Service. There is a strength table for each Service which would show the maximum number of general or flag officers as a function of the total military strength in the Service.

2. The Organizational Executive Staff consists of the military chiefs, vice chiefs, deputy chiefs, health professionals, judge advocates, chaplains, comptrollers and

deputy comptrollers, chiefs of legislative affairs, inspectors general, chiefs of public affairs and superintendents of the Service academies. The number in this category represents the fixed cost of operating the Service.

3. The Reserve Forces category includes all full-time active duty requirements for generals and flag officers in support of the reserve forces.

4. The Senior DoD and Armed Forces category covers positions in the OSD and JCS structures that are not exclusively attributable to a specific Service.

5. The Outside DoD category covers positions for general and flag officers outside the Department of Defense.

6. The Recalled Retired category includes those retired officers called back to active duty to pursue special work.

b. The number of officers in each category that could be on active duty at the end of the fiscal year would be included in the Department's annual authorization request.

c. The formula for determining the number of general and flag officers in each grade would be revised so that the proportion of three and four star officers decreases as the total number of flag and general officers increase.

d. The Department would be required to establish a uniform system for the review, validation and reporting of general and flag officer requirements to include the review of 25% of the Departments requirements each year.

The Department is limited to a maximum of 1,073 general and flag officers on active duty, notwithstanding a requirement for over 1500. The FY 78 DoD Authorization Act reduced the Department from 1,141 general and flag officers to the 1,073 ceiling. We would like to eliminate the present ceiling and allow the number to rise in response to our needs. However, we doubt that the number would go beyond the FY 1978 level.

QUESTION: If approved, what would be the cost of this program in FY 1986? FY 1987?

ANSWER: Any increased costs would be a function of the increase in the number of general and flag officers. Since the legislation would require Congress to authorize annually the number in each category, there is no way to predict in advance how many more officers the Department might have and, therefore, how much more money would be involved. As a rule, however, there is very little cost associated with an increase in general and flag officers since the numbers are very small. Even if the Department were to return to the FY 78 level of around 1,140, the total increase in pay and allowances would only be about $.8 million.

FIFTH QRMC INCENTIVE RECOMMENDATIONS

QUESTION: Dr. Korb, your statement indicates that you are considering legislation to implement recommendations of the Fifth Quadrennial Review of Military Compensation designed to improve special and incentive pays and survivor benefits.

Please detail these recommendations and their anticipated funding requirements in FY 1986 and FY 1987.

ANSWER: The Fifth QRMC made several recommendations to enhance special and incentive pays, including equalization of officer and enlisted rates in seven hazardous duty pays, increases in death gratuity and burial allowances, hostile fire pay, career sea pay, responsibility pay and family separation allowance. These special and incentive pays and allowances are critical factors in the Services' ability to attract and retain the requisite numbers of quality careerists. The Department's legislative contingency account has funds set aside for these initiatives in the amount of $97.0 million and $79.0 million for FY 86 and FY 87, respectively.

AVERAGE COST OF MILITARY PERSONNEL

QUESTION: Provide the average cost of compensation of active duty military personnel by officer, enlisted, and the combination of the two, for the period Fiscal Year 1980-1986.

ANSWER: The requested data are as follows:

Average Cost of Active Military Personnel
(Dollars)

	Officer	Enlisted	Combined
FY 1980	27,701	12,046	14,159
FY 1981	31,980	13,875	16,341
FY 1982	37,363	16,001	18,935
FY 1983	38,749	16,715	19,781
FY 1984	39,422	17,181	20,320
FY 1985 (With Retired Pay Accrual) 1/	55,781	24,224	28,725
FY 1986 (With Retired Pay Accrual) 2/	57,589	25,097	29,751

1/ Assumes 3 percent pay raise effective July 1, 1985.
2/ Assumes 3 percent pay raise effective for full year.

The foregoing data include all costs in the active military personnel appropriations and the tax advantage (for allowances not subject to taxation), except for those costs for:

- o Pay and allowances of cadets and midshipmen.
- o Permanent change of station travel.
- o Death gratuities, apprehension of deserters, unemployment compensation for former military personnel, survivor's benefits, and educational benefits.

The data are on a direct basis; i.e., they exclude reimbursable dollars and strengths.

Beginning in FY 1985, the Defense budget reflects amounts to cover the accruing retirement liability for personnel on the rolls as of October 1, 1984.

AVERAGE COST OF MILITARY PERSONNEL

QUESTION: What is the status of the Department of Defense report on military and civilian compensation comparability? Will it be forwarded to the Committee by May 1, 1985, as requested?

ANSWER: A contract has been let with a private sector firm to perform the military and civilian compensation comparisons requested by the Committee. The contractor is currently in the data collection/methodology development phase of the study. An interim report will be forwarded to the Committee by May 1, 1985.

PERMANENT CHANGE OF STATION REIMBURSEMENTS

QUESTION: Provide for the record estimated FY 1984 and FY 1985 out-of-pocket expenses for permanent change of station, by grade, single and married, officer and enlisted, including a calculation of median out-of-pocket expenses as a percentage of disposable income.

Project the same information for FY 1986, including a breakdown of the impact of each new PCS initiative on out-of-pocket expenses, both in actual dollars and as a percentage of disposable income.

ANSWER: Data reflecting actual out-of-pocket expenses by individual grade, by Service, is not maintained. However, data based on several studies and surveys show that members suffer significant financial hardship each time they are directed to relocate. A recent survey showed that, exclusive of home ownership costs, for every $4 our members spend on a permanent change of station (PCS) move, only $1 is reimbursed by the government. This translates to median unreimbursed expenses ranging from approximately $1,400 to over $2,700, depending on grade. Consequently, over half of our members have to borrow or withdraw money from their savings in order to meet their moving expenses. To an E-5, an $1,800 out-of-pocket expense represents a loss equivalent to 33 months of the January 1985 pay raise. Adequate compensation must be recognized as a cost of doing business. The proposals we have included in the FY 86 budget, if approved, will impact greatly on the financial well-being of the vast numbers of our members who move each year.

QUESTION: Provide for the record a breakdown of the $228.2 million requested in the legislative contingencies account for permanent change of station initiatives, together with an explanation of each entitlement for which funding is requested. Also provide out-year cost projections for each of these initiatives (FY 1987-1990).

ANSWER: The FY 86 Legislative Contingency contains an initiative which would restructure the current monetary allowance in lieu of transportation (MALT) system. It contains:

o Per diem for dependents
  oo rate of $37.50 per day for dependents over 12 years
  oo rate of $25.00 per day for dependents under 12 years
o Privately owned conveyance (POC) operating mileage allowance
  oo Rates of:
    - 15¢ per mile for member or dependent traveling alone
    - 17¢ per mile for member and one dependent
    - 19¢ per mile for member and two dependents
    - 20¢ per mile for member and three dependents
o Lifting of statutory ceiling on per diem rates

This initiative is designed to reimburse Service members for their expenses and for the expenses of their dependents incurred during travel and PCS relocation. This proposal is consistent with the recommendation made in a 1980 GAO report, "Proposals for Improving the Management of Federal Travel."

Out-year cost projections follow:

($ in millions)

FY87	FY88	FY89	FY90
229.7	230.3	231.1	231.7

DEPENDENT STUDENT TRAVEL

QUESTION: What is the FY 1986 funding request, by Service, for the dependent student travel program? What is the projected budget for this program in FY 1987?

Provide FY 1986 and FY 1987 funding requirements if the restriction against payment for travel within or between the contiguous United States were discontinued.

ANSWER: Funding authority in the following amounts has been requested for FY 86 and FY 87 for dependent student travel:

	FY86	FY87	
Army	1.7	1.8	
Navy	.7	.7	
Air Force	1.8	1.9	
Marine Corps	-	-	(funds from within available resources)

If the restrictions against payment for travel within CONUS were lifted, the requirement would be for an additional amount, as follows:

(In millions of dollars)

	FY86	FY87
Army	.2	.2
Navy	.1	.1
Air Force	.3	.3
Marine Corps	.02	.02

HOUSING ALLOWANCES

QUESTION: One of the arguments for maintaining Rent Plus in Alaska and Hawaii concerns resulting hardships that will increase unaccompanied tours and sharply increase permanent change of station monies. It is said that these unwanted changes will more than offset any savings from moving to a VHA.

What empirical data does the Department of Defense have to indicate that service members will decrease extension in Alaska and Hawaii? What is the annual number of extensions and extension rates and how can it be proven that this one factor will cause a change in the individual's behavior? Isn't it true that people extend their tours for a variety of reasons many of which are opposed to lack of housing benefits?

ANSWER: The recently completed DoD Rent Plus Housing Allowance (RPHA) Study indicates strong support from all overseas commanders for the basic RPHA system. They attribute the success of the program to an allowance that permits all Service members the opportunity to live in adequate housing. The Housing Allowance (HA) Index system in effect prior to Rent Plus did not provide a sufficent allowance to permit all Service members to defray overseas housing expenses effectively because of payment inequities inherent in an averaging system. This was one of the reasons that GAO recommended in a 1980 report that Rent Plus replace the HA Index system.

Since VHA is also an averaging system, we would expect similar results to the previous HA Index system. Many Service members will once again be unable to afford adequate housing, thereby eroding the housing quality gains we have made with Rent Plus. Although we do not have specific empirical data to indicate the effect a change to

VHA will have on extensions in Alaska and Hawaii, it is reasonable to assume that personnel would be more inclined to extend if they could afford adequate housing. Statistics are not available on the annual number of extensions for Alaska and Hawaii.

However, a 1984 DoD Survey of Living Conditions Overseas completed by the Navy Personnel Research and Development Center, San Diego, CA, using a sample of 17,364 people in England, Germany, Italy, Japan/Okinawa, and Korea found that 56% reported living conditions affected job performance and 40% reported living conditions affected military career intentions. The majority showed living conditions impact as negative. E-1 to E-3 paygrade groups were also somewhat more likely than other paygrade groups to perceive the effects of living conditions as negative. Although it is true that personnel extend their tours for a variety of reasons, the above impact of living conditions on job performance and career considerations implies that living conditions will therefore have a strong influence on extensions.

QUESTION: What additional PCS costs are involved and how is this estimated?

ANSWER: Since we don't have an estimate of the reduction in extensions if VHA is implemented in Hawaii and Alaska, we are unable to identify PCS cost savings.

QUESTION: It has been mentioned by DoD that military members enter and exit the housing market more frequently than their civilian counterparts. Accordingly, DoD says that the military are less able to enter into long-term rental contracts or mortgages, which results in military members' housing costs reflecting quicker inflationary increases than those of civilians. This is one of the suppositions used by DoD to base VHA rates on military reported housing costs.

What empirical data exists to support these views? How would you quantify this argument; e.g., how much more inflationary is it in dollar values?

ANSWER: While the estimates of the number of moves made by military and civilian personnel vary considerably depending upon the source, it seems clear that, on average, military personnel move more frequently than their civilian counterparts. It is not unusual for a military member to move as many as 20 times during the course of a full career; and on average, the Third Quadrennial Review of Military Compensation (QRMC) estimated that the military member moved 9 times during his career. Estimates of the average number of moves made by civilian workers range from 2 to 5, depending on the method of computation. Though definitive and comprehensive data is not readily available, it is also clear that the more frequent moves made by military personnel result in greater costs to them. In terms of rentals, anecdotal evidence abounds that long-term tenants pay less rent than tenants who moved in recently, and in the case of homeowners, it goes without saying that those who move frequently will pay current market rates, both price and interest rates, while long-term homeowners can enjoy stable housing costs.

QUESTION: It appears that civilians migrate quite frequently, particularly within geographical areas. Doesn't this phenomenon also cause rental costs to increase?

ANSWER: Yes, those civilians who move frequently will incur greater rental costs than long-term tenants and will cause rental costs overall to be greater. It is this phenomenon that accounts for military personnel experiencing greater housing costs than their counterpart civilians, since military personnel, on average, move more frequently than civilians.

QUESTION: The VHA program encourages members to share quarters because everyone gets the established allowance for the paygrade regardless of actual housing costs. The Rent Plus program reimburses everyone for their housing costs up to a ceiling set at the 80th percentile of reported housing costs. Therefore, under Rent Plus there is no incentive to share. The prime argument used by Dr. Korb for maintaining Rent Plus in Hawaii revolves around the fact that there is a low vacancy rate. Therefore, it would seem appropriate that a mechanism should exist in Hawaii to encourage sharing quarters to free up more housing to better accommodate the demand. What are your views?

ANSWER: The prime argument to retain Rent Plus in Hawaii is not because of the low vacancy rate there. One reason to retain Rent Plus in Hawaii is to provide Service members with a sufficient allowance to compete for adequate housing in the very expensive and difficult rental market there. However, this is not the prime argument to retain Rent Plus there, but only one of the arguments.

One of the most significant differences from CONUS for both Alaska and Hawaii is members' inability to commute to lower cost housing because of the island or remote nature of these locations. In any high-cost area of the CONUS, it is still possible to commute to find cheaper housing. In Hawaii, going to other communities or across the island simply does not change prices that much due to the extremely high demand for housing and the very low vacancy rate of a little over one percent. In Alaska, Service members are equally bound by the remoteness of the area with no suburbs to seek for less expensive housing.

Both Alaska and Hawaii have also been traditionally treated as overseas assignments for personnel policies dealing with tour lengths, travel and medical travel benefits, etc. The geographical location of Alaska and Hawaii had much to do with this established overseas status and the entitlement of Service members stationed there to an overseas housing allowance. Travel to and from both places is expensive and difficult, and members are bound by the same island or remote environment that restricts their housing selection. Scarce, high-cost rentals dominate both areas. The very high cost of living encourages most Service members not to spend more than their RPHA because they need all their "other than housing" money for other things, including unique overseas expenses such as a trip back to CONUS. Since Hawaii and Alaska are overseas tours, some Service members have a less permanent view of their housing situation and accept living in less housing than they would if they were assigned to CONUS.

QUESTION: To what extent are military members sharing housing in CONUS and Alaska and Hawaii?

ANSWER:

	SHARERS (% WITHOUT DEPENDENTS)			
	* 2	3	4	TOTAL
CONUS (Sample)	22.2	5.3	2.1	29.6
Alaska (Census)	7.1	1.4	0.3	8.8
Hawaii (Census)	21.7	2.7	0.2	25.0

* Number of people sharing housing unit

SHARERS (% OF WITHOUT DEPENDENT MEMBERS BY PAYGRADE)

	E-3	E-4	E-5	E-6	O-1	O-2	O-3
CONUS	53.8	45.4	28.7	16.1	50.5	35.4	13.9
Hawaii	40.0	30.7	26.8	16.7	27.2	28.7	12.5

The above chart indicates the lifestyle preference of the more senior grades and may also indicate that with more disposable income they can afford to live without sharing.

QUESTION: Doesn't it seem that a VHA type system would be more appropriate for this situation?

ANSWER: No. DoD has no obligation to encourage Service members to share housing to alleviate a low vacancy rate problem that has not been solved by the local area. In addition, RPHA would continue to provide the following advantages over a VHA system in both Alaska and Hawaii.

1. RPHA provides an equitable and adequate reimbursement for actual overseas housing costs. Over/undercompensation inherent in an averaging system are eliminated.

2. RPHA provides a level of compensation that permits members to compete in tight housing markets that feature limited adequate rentals, a narrow price range with little flexibility in price options, and small rental units.

3. RPHA provides a sufficient allowance to permit members to afford adequate family housing for an accompanied tour. There has been considerable and proper emphasis lately on quality of life and the military family concept. Soldiers, sailors, airmen and marines who are able to take their families with them for out-of-CONUS tours serve longer accompanied tours that benefit station stability. Accompanied tours create a higher level of morale that results in better on-the-job performance, better retention, and improved overall readiness.

4. The RPHA system is capable of responding quickly to rapid fluctuations in housing costs or currency changes, thereby reducing hardship on the member.

5. The RPHA system has allowed members to become more competitive in a larger portion of the overseas housing market and to upgrade the quality of their housing. Members are now able to afford adequate housing suitable to their position as our American representatives overseas.

QUESTION: One smoothing procedure used in VHA rate setting is to prevent pay inversion. The manner in which DoD applies the technique biases the rate upward and has increased VHA program costs. This results because the Per Diem Committee arbitrarily adjusts the local median housing costs upward rather than adjusting rates based on reported housing costs.

What are your views and what if any program cost savings would result if rates were adjusted as opposed to housing costs? Doesn't this procedure have the tendency to increase rates for higher graded members? What impact does it have on lower graded members?

ANSWER: The assertions in the stem of this question are generally incorrect. Pay grade smoothing is not used merely to prevent pay inversions. Substantial analysis shows that in those cases where the quantity of data is adequate, pay inversions do not occur. It is only when the number of data points is less than that required to produce statistically significant results that pay inversions sometimes do occur. Pay grade smoothing, therefore, is a statistical technique by which we apply regression analysis to pooled VHA survey data to produce valid rates for those low density pay grades.

Median housing costs are not arbitrarily adjusted upward. Regression analysis results in adjustments to housing cost estimates where data is limited. The greatest effect occurs in places with very small military populations.

In the long run, pay grade smoothing should be a zero sum exercise, but with some years costing more and some years costing less. The net result is to make the rates more consistent and thus the program more effective.

The result of adjusting VHA rates or housing costs would be the same. Rates are a direct function of housing cost estimates. We are not adjusting rates to reflect our views of what they should be. We are using generally accepted statistical procedures to estimate housing costs which in turn establish VHA rates. Procedures which adjust VHA rates directly would be arbitrary and unacceptable.

Pay grade smoothing does not affect the higher pay grades exclusively. Rather, when there is an inversion in adjacent pay grades due to a scarcity of data, the effect is to reduce the estimate of housing cost slightly for the lower pay grade and increase slightly the estimate for the higher. In pay grades with an adequate amount of data the effect is negligible.

QUESTION: Another technique applied in the VHA rate setting is called the year to year smoothing. It is designed to prevent members from receiving a smaller allowance than what they received the previous year. This procedure does not seem appropriate since housing costs fluctuate sometimes downward due to a variety of market conditions.

On what basis is this procedure justified? What effect does applying this procedure have on budget outlays for the VHA program?

ANSWER: It is not true that the year-to-year smoothing technique is designed to prevent members from receiving a smaller allowance than what they received the previous year, nor is this the result. The purpose of year-to-year smoothing is to dampen random fluctuations (either up or down) in one or a few pay grades within an MHA. (If all or most pay grades show an abnormal change, the year-to-year adjustment does not come into effect.) The year-to-year adjustment is designed to be a zero sum procedure in the long run. In some years, trends in the housing cost growth data show up as increases, in other years they will sum to decreases. Overall, all of the data enhancement techniques (smoothing) were designed using standard statistical procedures and should produce a zero program cost effect in the long run.

QUESTION: It was the sense of the Congress that the government should not overcompensate military members in excess of their actual housing costs. Last year DoD was asked by the Congress to estimate the amount of windfall compensation attributable to the VHA program and include the amount as a reduction in its FY 1986 budget. DoD estimated the windfall compensation at about $50 million.

Isn't this amount more like $100 to $120 million? If so, then how did you justify reducing the amount to $52 million? Isn't it true that in deriving your estimate you made several assumptions one of which was that members would react immediately to the announcement of the policy--as opposed to its effective date of implementation--and begin acquiring more expensive housing to avoid a loss in allowances?

ANSWER: DoD estimated a $55 million savings in FY 86 based upon the following assumptions:

a. That from survey date (April 84) to announcement date (January 85) members' costs grew at an annual rate of 5.3%; i.e., from April 84 to January 85 costs grew 3.98%.

b. That once the policy was announced (June 85) members who would be affected would, at the time of their next PCS, increase their purchase of housing services to avoid losing compensation.

c. Average tour of duty assumed to be two years. This may be on the low side, but is offset by the assumption that some owners would refinance prior to their next tour of duty.

If all affected Service members continue to spend the same amount on housing after their next PCS, the estimated saving is $102.8 million. It was not assumed that, following announcement of the policy, members would adjust immediately; rather it was assumed that members would adjust coincident with their next PCS.

QUESTION: What is the basis for this assumption?

ANSWER: The typical member would use the occasion of his next PCS to increase spending on housing based on the belief that not doing so would result in a decrease in compensation when the policy became effective.

QUESTION: How can it be that everyone will react immediately and in the same way to the announcement of the policy? What data would suggest this behavior?

ANSWER: Not everyone was assumed to react immediately. Everyone affected was assumed to react in a manner which would avoid a decrease in his compensation, namely by spending more on housing at the time of his next PCS move.

No data was available concerning Service members' reaction to the policy of reducing compensation for members currently spending less than that compensation. However, basic economic theory supports the assertion that, when facing the choice between a) living in the same or equivalent residence and losing compensation or b) moving to a more expensive residence and maintaining compensation, the rational (utility maximizing) consumer will choose option b under a wide range of circumstances.

QUESTION: Depending on where you are in your career--e.g., close to retirement--why would people behave this way? Are you suggesting that these people would buy more expensive housing and incur greater costs at a point when their total income would be less? Isn't it true that the opposite would occur, that is these people would buy less?

ANSWER: Proximity of retirement would have no effect on this analysis, unless the Service member planned to reside at the same location and in the same residence after retirement. It was judged that the number of members falling into the latter category was very likely insignificant. Retirees' income does not fall until after retirement, at which point the member moves to his desired retirement location and spends whatever he chooses.

HEALTH PROFESSIONS SCHOLARSHIP PROGRAM

QUESTION: Considering the shortages of physicians and other medical specialty personnel, why is the request for the Health

Professions Scholarship program decreasing 14% over the last two years?

ANSWER: The decrease in the Armed Forces Health Professions Scholarship Program (AFHPSP) is reflective of reductions in the level of scholarships allocated to the military departments by the Assistant Secretary of Defense (Health Affairs). Scholarship allocations have been reduced because projections of need for AFHPSP graduates to meet authorized military physician strengths in future years show that the size of this physician accession program should be decreased. Because of the training lead time required before scholarship recipients become available to the military departments as fully trained physicians, the allocation of scholarships in any given year generates fully-trained physician accessions from six to ten years in the future, depending upon the extent of specialty training programs. Forecasts of future physician inventories and accession requirements demonstrate a decreasing need for AFHPSP scholarships to meet authorized physician end strengths in the out-years. The programs that have been requested represent the most efficient utilization of scholarships to attain future authorized manning levels.

TRIMIS

QUESTION: Provide a description of the Tri-Service Medical Information Systems Program, including a total funding and end strength profile for FY 1984 through FY 1986.

ANSWER: The TRIMIS Program provides centralized Department of Defense management of Automatic Data Processing Systems within the medical communities of the three Services in order to improve the effectiveness and economy of health care delivery within DoD. The primary initiative of the TRIMIS Program is to acquire and install a fully integrated, hospital-wide, Composite Health Care System which will meet the information needs of medical personnel. The Program has also initiated the Automated Quality of Care Evaluation Support System to provide significant benefits to medical treatment facilities in automating inpatient occurrence screening, incident tracking, and assisting in the patient administration functions. Other automated TRIMIS Systems include the following automated systems: Pharmacy, Radiology, Laboratory, Patient Appointment & Scheduling, Patient Administration, Hospital Information System, Computer Assisted Processing of Cardiograms, Tri-Service Food Service System, Tri-Service Logistics System, and Computerized Medical Record Information System.

	($ Millions)		
	FY1984	FY1985	FY1986
Total Funding	40.8	42.4	48.9
End Strength	50	70	70

FOREIGN MILITARY AFFAIRS

QUESTION: The FY86 budget request includes various increases for the amended Foreign Assistance Act within the training program. Are these costs reimbursed by the Foreign Military Sales program?

ANSWER: The International Security and Development Cooperation Act of 1985 would amend the Foreign Assistance Act of 1961 with respect to training as follows:

- authorizes reciprocal U.S. and foreign attendance at professional military education institutions without charge on a one-for-one basis;
- exempts military salaries from MAP funded training and service costs.

The $9.429 million increase in the funding level for the IMET program would allow for an increase from 97 to 105 in the number of countries and from 7873 to 8542 in the number of students participating in this highly successful security assistance program. The requested foreign aid appropriation would cover the cost of the program; as a grant program, these costs would not be reimbursed by the FMS Program.

The reciprocal training initiative would permit the one-for-one exchange of officers between U.S. professional military education institutions and comparable institutions in foreign countries. Costs associated with training foreign officers in the U.S. would be offset by reciprocal cost-free training provided to an equal number of U.S. officers at equivalent institutions in participating foreign countries.

The exemption of military salaries from MAP fundėd training and services would be consistent with Sec 632(d) which excludes military salaries from military assistance and, therefore, would not be reimbursed by the security assistance program.

RESERVE OFFICERS' TRAINING CORPS (ROTC)

QUESTION: The average number of enrollees in ROTC programs decreased 4% in FY 85 and increased 5% in FY 86. What is the reason for the instability in this program? Is DoD offering the total number of scholarships authorized in FY 86? What is the total amount of the ROTC program for FY 84 through FY 86?

ANSWER: Enrollment changes between FY 84 and FY 85 varied from service to service. The Navy program has grown by 500 midshipmen each year since 1983. Air Force enrollment is driven by production objectives. Enrollment is increased or decreased to meet these objectives. To date, the Air Force is meeting its ROTC production goals.

The Army is the only service which shows an unprogrammed decline in enrollment. This is the result of the introduction of higher standards which eliminated marginal cadets from the program. The Army also initiated requirements for commissioning based on specific academic disciplines; i.e., requirement for more students majoring in engineering and the sciences. The army also believes that an improving economy is providing students with more attractive options which compete directly with ROTC.

The five percent increase in enrollment projected by the services in FY 86, represents the increase required to meet future accession goals. The DoD is currently authorized 29,500 scholarships of which 27,500 are being used. The Air Force is using 7,500 scholarships, which is 2,000 less than authorized.

As described above, the Air Force met their production goals without the use of these additional scholarships. The additional scholarships will be used when enrollment of qualified students into the Air Force ROTC program does not meet enrollment objectives. The cost of the ROTC program for all the services is as follows:

($ in Millions)

FY 84	FY 85	FY 86
395.1	479.2	506.8

DEFENSE TRAINING DATA AND ANALYSIS CENTER

QUESTION: Provide a brief description of the Defense Training Data and Analysis Center including a funding and end strength profile for FY84 through FY86. Also provide the amount the Services contribute to this program for the same period.

ANSWER: The Defense Training Data and Analysis Center (TDAC) is the Office of the Secretary of Defense (OSD) focal point and central repository for Defense training-related data. It supports the entire DoD training community. TDAC's major emphasis is on collection, integration, storage, analysis, and dissemination of data on training and training technology topics. TDAC was established as a direct result of a recommendation by the 1982 Defense Science Board (DSB) Summer Study on Training and Training Technology. The recommendation was based on the need for a repository of data organized to allow the addressing of multi-service interdisciplinary training issues. The Secretary of Defense endorsed the recommendations of the DSB and, in August 1983, approved the creation of TDAC. The Senate Appropriations Committee Report on the FY84 defense appropriation bill highlighted the Secretary's decision and strongly supported the initiative to expedite and fund this critical project as quickly as possible.

TDAC has been operational since the beginning of FY85. OSD, OJCS, and the Services have been heavily involved in TDAC planning and have identified specific multi-service tasks for TDAC to accomplish. The charter and direction of the new activity were recently reviewed by the original members of the 1982 DSB panel. They expressed support for the TDAC concept and direction.

The following table shows TDAC's funding and end strength profile contained in the FY86 President's Budget.

TDAC FUNDING AND END STRENGTH
(Dollars In Millions)

	FY 1984	FY 1985	FY 1986
Funding			
O&M,N	—	2.8	3.9
End Strength			
Civilian	—	41	42
Military	—	12	12

The Secretary of Defense placed Research, Development, Test, and Evaluation funds in Service budgets for training research in support of TDAC's mission that total the amounts below:

	FY 1984	FY 1985	FY 1986
RDT&E	—	2.8	3.9

RECRUITING AND ADVERTISING

QUESTION: Provide the amount of recruiting and advertising resources for the active component for FY 1984 through FY 1986. Also provide the number of recruiters and accession goals for the same period.

ANSWER: Table 1 contains the recruiting advertising and resource budget and number of recruiters for FY 1984 through FY 1986. Table 2 provides the services' accession goals for the same period.

Table 1

DOD RECRUITING ADVERTISING AND SUPPORT

(Current $ Millions: Military Workyears Only)

Active Force	FY 1984 Actual Workyears	FY 1984 Actual Amount	FY 1985 Program Workyears	FY 1985 Program Amount	FY 1986 Budget Request Workyears	FY 1986 Budget Request Amount
Production Recruiters						
Army	4,951	$ 82.5	4,951	$ 87.8	4,951	$ 92.5
Navy	3,970	74.8	4,028	80.5	4,395	90.5
Marine Corps	2,403	38.1	2,458	40.8	2,458	42.6
Air Force	1,817	30.8	1,817	32.0	1,817	33.2
Total	13,141	$226.1	13,254	$241.0	13,621	$258.9
Recruiting Support [a]						
Army	3,997	235.0	4,704	273.2	4,896	292.1
Navy	2,186	106.2	2,214	111.4	2,270	118.4
Marine Corps	2,142	73.9	2,166	79.5	2,166	82.4
Air Force	1,550	66.1	1,641	71.2	1,635	73.9
Facility Leases		67.5		69.5		69.5
Joint Market Research Pgm.		1.6		2.1		2.3
Total	9,875	550.4	10,725	606.9	10,940	638.6
Advertising [b]						
Army		68.9		81.5		93.6
Navy		13.1		20.6		23.3
Marine Corps		14.3		14.7		18.1
Air Force		16.1		16.8		17.6
Joint Advertising		18.7		16.6		22.0
Total		131.1		150.2		174.5
Enlistment Bonus						
Army		93.4		113.5		115.4
Navy		11.1		11.1		12.1
Marine Corps		7.8		7.9		8.6
Air Force		1.4		1.1		.6
Total		113.6		133.6		136.7
Active Force Subtotal	23,016	$1,021.2	23,979	$1,131.7	24,561	$1,208.7
Reserve Components [c]						
Production Recruiters						
Army National Guard	1,780	48.9	2,250	57.5	2,522	62.4
Army Reserve [d]	1,390	36.8	1,615	41.6	1,810	49.1
Naval Reserve	621	10.6	828	15.3	1,087	25.3
Marine Corps Reserve	200	4.2	228	5.4	232	5.5
Air National Guard	381	10.2	395	11.0	413	12.4
Air Force Reserve	231	6.3	256	8.2	273	8.8
Total	4,603	117.0	5,572	139.0	6,337	163.5
Recruiting Support [e]						
Army National Guard	859	49.9	1,069	53.4	1,133	59.8
Army Reserve	416	27.6	565	37.1	629	49.1
Naval Reserve	254	10.6	282	14.2	350	23.7
Marine Corps Reserve	112	5.5	98	5.2	101	5.5
Air National Guard	135	5.4	130	5.3	130	5.7
Air Force Reserve	72	3.6	73	4.2	75	4.8
Total	1,848	102.6	2,217	119.4	2,418	148.7
Advertising						
Army National Guard		7.5		8.8		12.6
Army Reserve		17.8		20.8		22.4
Naval Reserve		1.0		1.6		2.9
Marine Corps Reserve		2.4		2.6		2.7
Air National Guard		2.3		2.9		3.0
Air Force Reserve		2.4		2.6		2.9
Joint Advertising		1.8		2.0		7.5
Total		35.2		41.3		54.0
Enlisted Incentives [f]						
Army National Guard		29.8		40.7		48.9
Army Reserve		10.5		18.5		19.8
Naval Reserve		3.3		5.6		7.2
Marine Corps Reserve		2.2		3.2		3.3
Air National Guard		3.1		4.2		5.2
Air Force Reserve		2.6		3.0		3.0
Total		51.6		75.2		87.3
Reserve Force Subtotal	6,451	306.4	7,789	375.1	8,755	453.5
Summary						
Active Forces	23,016	1,021.2	23,979	1,131.7	24,561	1,208.7
Reserve Components	6,451	306.4	7,789	375.1	8,755	453.5
Total Resources	29,467	$1,327.6	31,768	$1,506.9	33,316	$1,662.2

*Note: Numbers may not total due to rounding. Data excludes examining resources and cost of retirement accrual.

[a] Includes pay and support for headquarters, field and training personnel, MEPS liaison counselors, recruiter aides and civilians, and other miscellaneous support. Facility leases are actually funded within the Army (Corps of Engineers) budget.

[b] Includes approximately $.8 million each year for U.S. Air Force Reserve advertising funded in Active Air Force budget.

[c] Amounts shown represent items specifically identified as Reserve recruiting resources.

[d] Includes civilian recruiter resources in FY 1984 (130 WY, $3.8M), FY 1985 (81 WY, $1.8M) and FY 1986 (21 WY, $.4M).

[e] Includes resources for headquarters/field support personnel, part-time recruiters, training and support expenses.

[f] Includes enlistment incentives, affiliation bonuses, educational assistance, and student loan repayments.

Table 2
Active Force
Enlisted Accession and Recruiting Resources
FY 1984 Actual, FY 1985 Program, FY 1986 President's Budget

Enlisted Accessions (All Sources)
(in Thousands)

Service	FY 1984	FY 1985	FY 1986
Army	142.3	139.8	146.4
Navy	82.9 [a]	87.6	94.3
Marine Corps [b]	42.2	39.0	35.3
Air Force	61.1	67.2	69.8
DoD Total	328.5	333.6	345.8

Recruiting Budget (Current $ Millions)

Service	FY 1984	FY 1985	FY 1986
Army	$466.0	$539.0	$578.0
Navy	169.3	181.9	201.4
Marine Corps	122.7	130.9	139.2
Air Force	90.3	95.9	99.1
DoD Total [c]	$935.9	$1,035.5	$1,111.1

Cost in Current Dollars
Recruiting and Advertisement Cost Per Accession

Service	FY 1984	FY 1985	FY 1986
Army	$3,276	$3,856	$3,948
Navy	2,043 (2,030) [d]	2,076	2,136
Marine Corps [d]	2,907 (2,410)	3,357 (2,745)	3,942 (3,141)
Air Force	1,479	1,427	1,420
DoD Total [c]	$2,759	$3,022	$3,133

Advertising Cost Per Accession

Service	FY 1984	FY 1985	FY 1986
Army	$418	$493	$570
Navy	119	174	187
Marine Corps	290	320	438
Air Force	99	95	95
DoD Total [e]	$329	$357	$418

Note: Numbers may not total due to rounding. Cost of retirement accrual was not included.

a/ Excludes approximately 2,000 NPS enlistments recruited for the Naval Reserves.

b/ Excludes approximately 9,000 NPS enlistments each year for the Reserves by regular Marine Corps recruiters.

c/ DoD totals include resources for facility leasing, joint market research program and joint recruiting advertising program.

d/ Average costs per accession in parenthesis include NPS enlistments for the Reserves.

e/ DoD totals include funding for the Joint Recruiting Advertising Program.

SUPPORT FOR GUARD/RESERVE RECRUITING AND ADVERTISING

QUESTION: What type of support and how much do the Active Components provide the Guard and Reserve Forces for Recruiting and Advertising?

ANSWER: The support breakout by Service is as follows:

Army: The Army Recruiting Command (USAREC) is responsible for active and reserve enlisted recruiting. Management and general support of both missions including advertising, personnel management, training, logistic support, market research and analysis, and management information is provided by a single organizational structure. While USAREC recruiters are assigned either a reserve or active force goal, referrals are made as appropriate between active and reserve recruiters. Army National Guard recruiting is done by the States.

Navy: Until FY 1984, the Navy Recruiting Command (CRUITCOM) was responsible for recruiting all non-prior service enlisted recruits for the Navy Reserve. The Navy Reserve (NAVRES) was responsible for prior service recruiting. In FY 1984, NAVRES assumed responsibility for the expanded Sea and Air Mariner (SAM) program. CRUITCOM provided extensive support during the FY 1984 transition period and has continued to assist NAVRES to achieve its non-prior service recruiting requirements. This support includes provision of marketing information and analysis, recruiter training, advertising management, educational specialist support, and referrals. The active and reserve recruiter share recruiting offices.

Marine Corps: The regular recruiting force is responsible for satisfying the non-prior service recruiting requirements for the Reserves. Prior service recruiting is the responsibility of the Marine Corps Reserve.

Air Force: While active and reserve recruiting for the Air Force is done by separate organizations and recruiting for the Air National Guard is done by the States, the recruiting activity within the total force is coordinated at all levels. At the national level, advertising for the Air Force Reserve is produced in exactly the same manner as for the active force programs. Literature on specific career fields, basic training, and other aspects of military life is produced for all components under the national program. Likewise, Reserve, Guard, and Active recruiters are trained in the same school. This formal cooperation is mirrored by informal agreements down to the unit locations. Active component recruiters share offices with reserve force recruiters and reserve and guard recruiters provide itinerary stops for active recruiters. Joint participation in job fairs, conventions, school visits, base open houses, and other civic events is also common.

ARMY TRAINING SUPPORT

QUESTION: Your training budget includes $32,364 thousand for O&M costs associated with the fielding of new or modernized equipment in FY 1986. Provide the type of equipment, the quantities, which quarter the equipment is being fielded, and the costs associated with each type of equipment.

ANSWER: The O&M Justification of Estimates for Fiscal Year 1986 includes $32,364 thousands in this budget activity to support fielding of new or modernized equipment. The attachments display the systems, quantities, and costs associated with each system in this budget activity. The quarter of fielding has no relevance to the amount of funds requested. When the Army budgets for the fielding of systems, a factor of one half year's initial sustainment is used for all systems. This is because, on average, a new system is operating in the field for only six months of the fiscal year in which it is fielded.

RC COURSES IN FY 86

QUESTION: $4,581 thousand is added to the budget for development and implementation of Reserve Component courses in FY 1986. How was this training accomplished prior to this request?

ANSWER: Prior to this request, the training was not accomplished because these exportable courses have not yet been developed. RC who cannot leave their civilian jobs to attend AC resident courses rely on Army to produce these type correspondence courses and USAR school courses. These exportable courses are referred to as RC Special Configured Courses, and allow RC to obtain required knowledge in nonresident status.

QUESTION: Are the Reserve Components reimbursing the Army for these costs?

ANSWER: No, the Reserve Components of the Army are an integral part of the total Army. As such, total Army appropriations fund all Reserve Component fiscal needs.

QUESTION: Provide a brief description of the efforts included in this line.

ANSWER: This line pays for initial course configuration development costs at AC schools for the following categories: Primary Technical Courses, Basic Technical Courses, Basic and Advanced Non-commissioned Officer Leadership Courses, RC Warrant Officer Technical Courses, and seventeen different branch RC Officer Basic Courses. All courses other than NCO leadership courses teach RC how to perform their military specialty jobs through nonresident status. Result is Army Readiness for mobilization.

WARRANT OFFICER TRAINING

QUESTION: What is the amount provided for warrant officer training in FY 1984 through FY 1986?

ANSWER: The OMA dollars provided for warrant officer training (excluding flight training) in FY 1984 through FY 1986 were:

($000)	FY 1984	FY 1985	FY 1986
	1910	1967	4812

QUESTION: How could the base amount be zero if the program is revising and expanding current courses?

ANSWER: The base amount was not zero; resources were in place but carried in a different activity prior to FY 1986 and the base number was erroneously shown as 0 instead of $1967. To enhance management of these resources, they were consolidated into the warrant officer training program account.

QUESTION: What is the justification for revision and expansion of current warrant officer courses?

ANSWER: On 6 July 1984, the Army recognized a need to insure all warrant officer candidates complete officership and technical training before appointment. The implementation of the Warrant Officer Entry Course (WOEC) provides that all newly accessed warrant officer candidates attend WOEC prior to appointment. Further, all warrant officers will attend the Warrant Officer Advanced Course (WOAC). This increases the total training requirement by approximately 75%.

RECRUIT TRAINING

QUESTION: Your training budget includes $3057 thousand for O&M cost associated with the fielding of new or modernized equipment in FY 1986. Provide the type of equipment, the quantities, which quarter the equipment is being fielded, and the costs associated with each type of equipment.

ANSWER: Our Force Modernization program does not include funds in Recruit Training. We cannot find any reference in the O&M Justification of Estimates for Fiscal Year 1986 that includes funds in Recruit Training to support fielding of new or modernized equipment.

OFFICER ACQUISITION

QUESTION: Will the $492 thousand budgeted in FY 1986 for laboratory equipment be a one-time purchase? What equipment are you buying in FY 1986?

ANSWER: The United States Military Academy (USMA) laboratory equipment purchase is part of a long-term upgrade plan to correct years of neglect. The planned purchase amounts in the outyears range from $800,000 to $1,000,000 per year.

The new equipment is important for accreditation. USMA's overall curriculum remains accredited by the Middle States Association. However, USMA is also seeking accreditation by the Accreditation Board of Engineering and Technology (ABET) for 4 Engineering programs and by the Computer Science Accreditation Board for its Computer Science program. In a USMA self-examination required by the ABET, equipment shortages and serious deficiencies were identified. During its formal visit, the ABET had the same findings; however, the full impact will not be known until the final ABET report is received in May. In any case, acquisition of the equipment is necessary for proper implementation of the academic program.

Specific equipment that will be bought in FY 1986 includes digital electronic sets, bench-type PH meters, power supplies, oscilloscopes, hand-held triplet multimeters, torsion meters, micro climate stations, cathode ray oscilloscope demonstrators, microwave optics devices, stereoscope photo interpreters, pocket stereoscopes, and reversion spectroscopes.

SPECIALIZED TRAINING

QUESTION: The Specialized Training activity group includes $22,301 thousand for O&M costs associated with the fielding of new or modernized equipment in FY 1986. Provide the type of equipment, the quantities, which quarter the equipment is being fielded, and the costs associated with each type of equipment.

ANSWER: The O&M Justification of Estimates for Fiscal Year 1986 includes $12,019 thousands in this budget activity to support fielding of new or modernized equipment. The attachments display the systems, quantities, and costs associated with each system in this budget activity. The quarter of fielding has no relevance to the amount of funds requested. When the Army budgets for the fielding of systems, a factor of one half year's initial sustainment is used for all systems. This is because, on average, a new system is operating in the field for only six months of the fiscal year in which it is fielded.

TRAINING WORKLOAD

QUESTION: What is the justification for an increased training workload of 5,698 in FY 1986?

ANSWER: The justification for an increased training workload from FY 85 to FY 86 can be attributed to a number of decisions. The paid strength for the National Guard increases from 438.4K in FY 85 to 450.5K in FY 86. Similarly, the Army Reserve paid strength ramps from 273.8K in FY 85 to 287.2K in FY 86. This growth directly contributes to increased training loads due to increased number of students attending institutional training courses. The Active Army growth is due to such factors as the decision to double the Combined Arms and Services Staff School (CAS^3) from 1200 to 2400 students; increase the number of Primary Technical and Basic Technical Courses (PTC/BTC) from 137 to 154; increase in the weighted average length for the Officer Basic Courses from 16.4 weeks to 17.8 weeks, which allows additional hands on tactical, maintenance, and leader hardening training. Expansion of Special Operations Forces and creation of Light Infantry Divisions (LID) has created needs for new courses and increase in student input for existing courses. Additionally, fielding of new equipment under force modernization has created a need for new courses and increased lengths of existing courses both for the Active Army and Reserve Components.

LEADERSHIP COURSES

QUESTION: Are there decreases in current leadership courses as new courses for additional hands-on tactical/maintenance/ physical and leadership courses are developed and introduced.

ANSWER: Over the past few years, the Army has centralized the responsibility for overall leadership development/philosophy in the Center for Army Leadership at Ft. Leavenworth, KS. In turn, a hierarchy of formal, leadership common core instruction has been developed, tested and is being implemented in both active and Reserve Component NCO, Warrant and Commissioned Officer training courses. In most instances, this instruction replaces previous courses or increases/decreases different blocks (hours) of instruction. Hands-on, in-the-field leadership instruction occurs indirectly as we rotate students through leadership positions, while teaching skills peculiar to a officer, warrant officer or NCO job. An example, of new hands-on training is a lieutenant in the Infantry Officer Basic Course will occupy a leadership position (Platoon Leader, Platoon Sergeant, Squad Leader, etc) while organizing and leading the Platoon in the attack. However, the fundamental leadership principles/traits are still taught in the classroom and this field training reinforces them. In sum, there are no decreases in leadership instruction just refinement, and more hands-on leadership situational training.

PROFESSIONAL DEVELOPMENT EDUCATION

QUESTION: Provide the total number of students in civilian schools and a funding profile for FY 1984 through FY 1986.

ANSWER: Fully funded and partially funded programs are generally degree producing. Short course instruction is technical in nature intended to train a specific skill, and is not degree producing.

In FY1984, at a cost of 37.5 million dollars, the Army educated 3,285 servicemembers under fully funded educational programs; 391 servicemembers under partially funded programs where educational expenses are borne by the participant; and 1,792 servicemembers participated in fully funded non-degree producing short courses of instruction.

In FY1985, the Army expects to spend 40.6 million dollars educating 3,568 servicemembers in fully funded educational programs. 465 servicemembers in partially funded programs; and 1,833 servicemembers in fully funded short course programs.

In FY1986, the Army expects to spend 42.7 million dollars educating 3,632 servicemembers in fully funded programs; 471 servicemembers in partiall6 funded programs; and 1,883 servicemembers in fully funded short course programs.

INCREASES IN THE SKILLS PROGRESSION TRAINING PROGRAM

QUESTION: Provide increases in the Skill Progression Training program by specific system for FY 1986. Also provide the total funding profile by system for FY 1984 through FY 1986, and when the new systems are fielded in FY 1986.

ANSWER: The total O&M funding profile for Specialized Skill Training is as follows (FY 85 dollars in millions)

FY 84	FY 85	FY 86
$161.4	$167.9	$177.4

For Fiscal Year 1986 the Skill Progression portion of Specialized Skill Training increases $4.0 million in O&M. A portion of this supports an increase of 1,117 additional TDY-to-School inputs to skill progression training courses (both resident and contract). This increased requirement for FY 86 is primarily driven by changes in Air Force mission, weapon system technologies, and changes in force structure. Although the additional TDY requirements are not allocated toward specific weapon systems, they were identified by major mission or functional area in the Air Force Program Objective Memorandum (POM). These major categories include Aircraft Maintenance Training; Mission Support Training; Tactical Air Forces (TAF) Training; Airlift Mobility Training; Strategic Offensive Training; and C^3 Training.

The remaining portion of this O&M requirement supports increases required for the USAF Contract Training program. In this case, dollar requirements are driven by new systems or modifications of existing systems. For FY 86, the Air Training Command identified $39.9 million in contract training requirements, of which the Air Force was able to fund $27.4 million. The following is a listing of the major systems requiring more than $500 thousand in contract training in FY 86:

Systems	Training Cost ($ in millions)
WWMCCS Information System	2.000
F-15/16 Modifications	1.350
Defense Support Program (DSP)	4.100
Milstar	.787
Airborne Self-Protection Jammer	.675
APR-38 Performance Upgrade Program (PUP)	4.100
B-1B	1.590
C-130HC Combat Talon II	.500
E-4B Configuration Retrofit Modification	.500
TRI-TAC	.950
BGM-109A GLCM	2.000
Minuteman Modifications	.500
CONUS Over-the-Horizon-Backscatter Radar	.750
New Computer Operations/Software	3.000

The remaining contract training requirements (less than $500 thousand) cover a total of 72 additional new systems or systems modifications.

DECREASE IN REQUIREMENTS IN THE SKILLS PROGRESSION TRAINING

QUESTION: Have there been any decrease in requirements in the Skills Progression Training in FY 1984 through FY 1986?

ANSWER: As reflected in the FY 1986 Military Manpower Training Report, FY 1984 loads and projected loads for FY 1985 and FY 1986 show a four to five percent growth. However, this is a decrease in expected growth and training loads from that shown in the FY 1985 Military Manpower Training Report. These changes can be attributed to better career retention than originally anticipated.

INITIAL SKILL TRAINED PERSONNEL REQUIREMENTS

QUESTION: Provide an explanation of the 552 additional end strength in FY 1986 for increased Initial Skill Trained Personnel Requirements. Also provide a total funding profile for FY 1984 through FY 1986.

ANSWER: The 552 additional end strength is primarily due to an increase in the average course length. As the average course length increases from 11.1 weeks in FY 1985 to 11.5 weeks in FY 1986 it results in additional instructors and students in the end strength computations. Courses are longer of necessity--

procurement of sophisticated weapons, systems, and equipment dictates that we train our "Blue Suit" operators and maintainers to higher technical levels. For example, with the conversion of our aircraft from conventional systems to integrated avionics we incur lengthier courses and increased student loads. These student loads are dependent on accession levels as well as the course lengths. Accession levels and student loads are summarized below for your information:

	FY 84 (Actual)	FY 85 (Estimate)	FY 86 (Estimate)
Non Prior Service Accessions	60,009	65,000	65,000

Student Loads	FY 84 (Actual)	FY 85 (Estimate)	FY 86 (Estimate)
Basic Military Trng	7,610	9,102	9,167
Gen Skill Training	19,159	22,078	22,365
Gen Intelligence Skill Trng	501	624	577
Cryptologic/SIGINT-Related Skill Trng	1,994	2,112	2,141
Total*	29,264	33,916	34,250

*Excludes instructors

AMENDED ARMS EXPORT CONTROL ACT

QUESTION: What is the total amount of support provided for the Amended Arms Export Control Act for FY 1984 through FY 1986. How can the policy change reduce reimbursements but not affect overall training costs?

ANSWER: Public Law 98-473, effective Oct 12, 1984 (FY 85), amended Section 21 (a)(3) of the Arms Export Control Act and repealed Section 21 (g). As a result, effective October 1984 foreign countries can purchase training at reduced Security Assistance reimbursement rates. While the foreign flying training student load remains at programmed levels, the percentage of training costs borne by foreign governments is reduced with total flight training costs unchanged. Therefore, the Air Force must absorb a greater percentage of the total foreign flight training costs. Increased costs to Air Force Operation and Maintenance as a result of bearing this greater percentage are as follows:

	FY 84	FY 85	FY 86
Flight Training	-0-	$ 8.1M	$ 5.1M
Total, O&M	-0-	$10.3M	$12.3M

ADDITIONAL FUNDING FOR TRAINING FACILITIES AND EQUIPMENT

QUESTION: Why is additional funding for training facilities and equipment needed when the total flight training load is down from FY 1985?

ANSWER: At several undergraduate pilot training (UPT) bases, portions of ground training are conducted in facilities which have deteriorated over the last several years. At Laughlin AFB, Texas, for example, academic training is conducted in pre-World War II barrack-type buildings which were refurbished into classrooms; flight line classrooms are over-crowded, were not designed to support UPT operations and are now in need of replacement. A new flying training center is being constructed to provide a modern, consolidated facility which is conducive to the UPT environment.

Other UPT-wide facility and equipment updates include modification of the instrument flight simulator centers to install computer generated flight simulator displays, installation of T-46 cockpit simulators, and installation of computer assisted instruction (CAI) equipment used throughout academic training phases.

All modifications are required to upgrade/replace unsuitable facilities and modernize equipment regardless of the minor decrease in student loads.

UNDERGRADUATE PILOT TRAINING

QUESTION: What is the justification for the increase in flying hours for Undergraduate Pilot Training?

ANSWER: During 1977-1980, Air Training Command cut programmed student flying time in the undergraduate pilot training (UPT) syllabus from 210 hours to 170 hours. The largest cuts were made to instrument flying hours when instrument flight simulator (IFS) centers were instituted at each UPT base. Annual analyses of post-UPT pilot performance and formal feedback from using commands during semi-annual course training standards (CTS) conferences continually indicate a strong need to increase hands-on flying time for UPT students--particularly in the instrument category. Three sorties (1.3 hours each) have been added to the FY 1986 syllabus: one T-37 (primary trainer) instrument sortie and two T-38 (basic trainer) instrument sorties. Four additional sorties are being added to the FY 1987 and FY 1988 syllabuses, two sorties each year in each aircraft.

INCREASING CIVILIAN PERSONNEL

QUESTION: Why is the Air Force increasing civilian personnel by 17 workyears in FY 1986?

ANSWER: The 17 workyears increase in FY 86 reflects military to civilian conversion for simulator maintenance to be studied for conversion to contract.

PROFESSIONAL DEVELOPMENT EDUCATION

QUESTION: What is the justification for 21 additional workyears in FY 1986?

ANSWER: The increase of 21 workyears reflects the full manyear impact of the FY 85 growth for Aerospace Doctrine, Research and Evaluation, low observable (stealth) technology instructors and growth in CRES/CADRE (Phase II and III) in FY 86.

TRAINING AND EDUCATION-HEALTH CARE

QUESTION: The FY 1986 budget request includes an additional 14 civilian workyears in this budget activity. What is the reason for this increase?

ANSWER: The increase of 14 civilian workyears reflects the full impact of the FY 85 end strength growth and a half workyear impact of the FY 86 end strength growth for health care training expansion.

NAVY SPECIALIZED SKILL TRAINING

QUESTION: Provide a description of the General Skill Progression Training Program. Include a funding and training load profile for FY 1984 through FY 1986. Also highlight the number of civilian employees assigned to this program for the same period.

ANSWER: The Military Manpower Training Report (MMTR), Vol IV of the Force Readiness Report, defines the Skill Progression Training program as that training received by enlisted personnel subsequent to Initial Skill Training. Through this training the student gains knowledge to perform at a more skilled level or in a supervisory position. Skill Progression Training is most frequently given after servicemembers have gained experience through actual work in their subspecialty. Skill Progression Training for officers is, generally, aimed at officers with several years of practical experience and provides them knowledge needed to assume more advanced responsibilities.

Funding for Skill Progression Training:

	FY-84	FY-85	FY-86
Total ($ M)	705.1	723.9	740.8

Training load profile for Skill Progression Training

	FY-84	FY-85	FY-86
Active (O/E)	1004/12332	1124/13065	1148/13260
Reserve (O/E)	15/ 57	14/ 94	14/ 114
Total (O/E)	1019/12409	1138/13159	1162/13374

Civilian employees assigned to Skill Progression Training:

	FY-84	FY-85	FY-86
Direct hire	291	302	302

AVIATION SCHOOLS

QUESTION: Provide a description of the Aviation Schools, including a funding and training load profile for FY 1984 through FY 1986.

ANSWER: This question does not contain enough information for the Navy to understand what the subcommittee wants to know and, as such, we cannot, despite an honest attempt, provide answers.

NAVY SPECIALIZED SKILL TRAINING

QUESTION: What is the funding and training load profile for the Surface Warfare Officer Career Training Program?

ANSWER: The funding profile is: (in $M)

FY-84	FY-85	FY-86	FY-87	FY-88
2.1	2.4	3.1	3.3	3.4

ANSWER: The Surface Warfare Officer School training load profile is: (officers per year)

FY-84	FY-85	FY-86	FY-87	FY-88
3,092	3,542	3,642	3,965	4,450

QUESTION: Why is the Navy requesting $735 thousand in FY-86 to modify this program?

ANSWER: Following a series of audits and reviews which identified weaknesses in officer training and professional development, a major revision to the surface warfare officer career path was approved in FY-84. This revision is being progressively implemented following developmental work and pilot training courses in FY-84 and 85. The purpose of the modification was to provide more experienced, better trained officers to insure the readiness of our increasingly sophisticated ships. Funding is necessary for the development of new courses, revision and continuous update of old courses, and significant instructional upgrades. Continued funding of this initiative in the out years is essential to maintain current instructional material for increased student throughput, and to fund civilian manpower and contracting costs as the Surface Warfare Officer's School reduces military support personnel, and MPN requirements.

QUESTION: What are the modifications proposed in this training?

ANSWER: The establishment and expansion to include all initial accession officers of a Junior Officer Engineering Course. Revision of the Surface Warfare School Department Head Course to teach extensive packages in Amphibious Warfare, Service Force Operations, and Diesel Engineering. (Previously the course was entirely Crusier Destroyer oriented). Revision of the Executive Officer Course to allow tailored modular instruction in engineering, combat systems and operations rather than redundant training to all PXO's in all areas. An increase in the length of the Prospective Commanding Officers Course to allow additional combat systems maintenance and tactics training. The single siting of all Officer Damage Control Training and increased student throughput in this course. Upgrading the quality of combat systems instruction throughout the entire spectrum of Surface Warfare Officer Courses. A complete revision of the 17 week Surface Warfare Basic Course.

NAVY FLIGHT TRAINING

QUESTION: What is the total amount of the T-2C aircraft maintenance contract for FY 1985 through FY 1990.

ANSWER: There are two types of aircraft maintenance contracts for the T-2C aircraft -- site support and standard depot level maintenance (SDLM). The cost for these two separate contracts is as follows:

	FY-85	FY-86	FY-87	FY-88	FY-89	FY-90
		(Dollars in Millions)				
T-2 Site Support	$4.2	$13.8	$13.9	$12.7	$12.2	
T-2 SDLM	$3.3*	$ 4.5	$ 6.8	$ 8.7	$ 8.5	$4.5*

*only covers six months

NAVY FLIGHT TRAINING

QUESTION: Why did the Undergraduate Naval Flight Officer Training System Upgrade required annual level increase by 4,850 hours?

ANSWER: The Undergraduate Naval Flight Officer (UNFO) training syllabus was expanded to raise the level of NFO training to more closely parallel undergraduate pilot training by providing increased inflight training. The current cost of graduate training in the Fleet Replacement Squadron mandates that the UNFO syllabus provide the best possible product while minimizing attrition. The upgraded syllabus specifically addresses previously documented deficiencies in inflight communication, tactical skills, spatial orientation and actual flight experience. It was implemented coincident with the phased introduction of the T47A into UNFO training during FY-85. Commencing in FY-86, the T47A will maintain a constant annual level and provide the primary support for the upgraded UNFO training syllabus.

NAVY FLIGHT TRAINING

QUESTION: Provide an explanation of the increase in the Pilot Training Rate in FY 1986. Also provide the funding and training load profile for FY 1984 through FY 1986.

ANSWER: The Pilot Training Rate increases by +24 (+36 Strike, -11 Maritime, -1 Rotary) in FY-86. The increase reflects additional pilots required to support the new 14th carrier airwing and Marine Corps management actions which balance pilot inventory with requirements.

The following is the pilot training funding profile ($ in thousands):

		FY-85			FY-86
	FY-84	BUDGET REQUEST	APPROPRIATION	CURRENT ESTIMATES	BUDGET REQUEST
STRIKE:	111,730	164,048	162,397	153,532	170,858
MARITIME:	26,403	27,914	27,702	32,343	33,909
ROTARY:	24,844	30,603	27,073	25,537	45,853
TOTAL, PILOT TRAINING	162,977	222,565	217,172	211,412	250,620

The total funding increase attributed to the Pilot Training Rate growth is +$6.964 million. The remainder of the funding increase is comprised of pricing adjustments, TH-57 helicopter parts, stock funding of aviation depot level repairables, T-2C aircraft contract maintenance and conversion to JP-5 fuel and is justified in detail on pages 8-36 and 8-37 of Department of the Navy Justification of Estimates for Fiscal Year 1986, submitted to Congress February 1985, Operation & Maintenance, Navy.

The following is the student pilot training load profile:

AVERAGE ON BOARD:	FY-84	FY-85	FY-86
STRIKE	741	847	896
MARITIME	508	480	498
ROTARY	716	771	805
TOTAL	1,965	2,098	2,199

The load profile submitted on page V1-7 of the Department of Defense Military Manpower Training Report, FY-86, Volume IV, Force Readiness Report, does not include Coast Guard and Foreign Military Sales students.

OTHER TRAINING SUPPORT

QUESTION: Why are there additional course requirements needed in initial (factory) training? Is there any decrease in the requirements for initial training?

ANSWER: This question does not contain enough information for the Navy to understand what the subcommittee wants to know and, as such, we cannot, despite an honest attempt, provide answers.

MANPOWER

QUESTION: What is the total number and dollar amount of audits to be conducted on aviation maintenance training by the Naval Material Command in FY 1986?

ANSWER: During Fiscal Year 1986, 14 technical evaluation program reviews of Naval Aviation Training courses are scheduled to be conducted by the Naval Air Systems Command. The budgeted cost is $210,000 for the review of 128 training courses.

OUTFITTING SUPPORT

QUESTION: Provide the total amount of outfitting support in Budget Activity 8 for FY 1985 through FY 1986.

ANSWER: BA-8 outfitting support for FY 1985 and FY 1986 is $17,640,000 and $18,298,000 respectively.

AMENDED ARMS EXPORT CONTROL ACT

QUESTION: What is the total amount of support provided for the Amended Arms Export Control Act for FY 1984 through FY 1986? What is the reason for the $518 thousand increase in FY 1986? Are these costs reimbursed by the Foreign Military Sales Program?

ANSWER: These questions do not contain enough information for the Navy to understand what the subcommittee wants to know and, as such, we cannot, despite an honest attempt, provide answers.

HOSPITALS AND CLINICS

QUESTION: Provide a total funding and civilian endstrength profile for the Automated Data Processing System for fiscal year 1985 and fiscal year 1986. Also provide an explanation of funding increase in fiscal year 1986.

ANSWER: The perceived increase in Automated Data Processing funding and civilian personnel resources is occasioned by two factors in the management of these programs.

1. Reimbursable Tri-Service programs became direct funded vice reimbursable two fiscal years following their installation. Those systems installed in fiscal year 1984 whose operations and maintenance were paid by DOD become Navy's direct funding responsibility in fiscal year 1986.

2. Revision of the investment/expense criteria for equipment purchases. Prior to this revision the majority of Automated Data Processing equipment was funded under the Other Procurement, Navy appropriation. This has now shifted to Operations and Maintenance, Navy for fiscal year 1986 and beyond.

Therefore, the program appears to have a larger than normal increase but, in fact the cost has not increased, only the type and method of funding has changed.

HOSPITALS AND CLINICS

The funding profile for fiscal year 1985 and fiscal year 1986 follows:

Station Hospitals and Clinics

	($000)	CIVPERS	
	DIRECT	REIMB	DIRECT
Fiscal year 1985 ADP	588	78	0
Tri-Service Medical Information System Manpower Costs	+1,060	-42	+42

As a result of a Department of Defense decision, manpower utilized to operate automated clinical systems installed under the auspices of the Tri-Service Medical Information System program are to be funded by the Services vice the Department of Defense (Operation and Maintenance, Defense Agencies) beginning in fiscal year 1986. These resources reflect the value of transferring 42 civilians from the former reimbursable status to direct fund status. Although these dollar resources are reflected as an increase in the Navy budget request, they represent no change in the number of civilian employees already in place at Navy facilities.

	($000)	CIVPERS	
	DIRECT	REIMB	DIRECT
Tri-Service Medical Information System Manpower Average Salary	-94		

The average salary of the Tri-Service Medical Information System civilians transferred from reimbursable to direct fund is reduced to be comparable to the medical cost.

Expense/Investment Criteria Revision +383

Amount transferred from the Other Procurement, Navy appropriation to the Operation and Maintenance, Navy appropriation pursuant to the proposed DOD initiative for elimination of $3,000 investment threshold and adoption of central management criteria as a governing factor.

Equipment Reduction -383

Reduction in equipment transferred from Other Procurement, Navy. Removes equipment for the Family Practice program.

Fiscal year 1986 ADP 1,554 36 42

Care in Regional Defense Facilities (Teaching Hospitals)

	($000) DIRECT	CIVPERS REIMB	CIVPERS DIRECT
Fiscal year 1985 ADP	3,746	44	0
Tri-Service Medical Information System Manpower Costs	+1,314	-44	+44

As a result of a Department of Defense decision, manpower utilized to operate automated clinical systems installed under the auspices of the Tri-Service Medical Information System program are to be funded by the Services vice the Department of Defense (Operation and Maintenance, Defense Agencies) beginning in fiscal year 1986. These resources reflect the value of transferring 44 civilians from the former reimbursable status to direct fund status. Although these dollar resources are reflected as an increase in the Navy budget request, they represent no change in the number of civilian employees already in place at Navy facilities.

Tri-Service Medical Information System Manpower Average Salary -306

The average salary of the Tri-Service Medical Information System civilians transferred from reimbursable to direct fund is reduced to be comparable to the medical cost.

Tri-Service Medical Information Systems Installed in Fiscal Year 1984 +568

Current Defense Department guidance directs that the funding responsibility for automated clinical systems installed under Tri-Service Medical Information Systems' auspices be assumed by the Services two years later. These resources cover the cost of four systems installed during fiscal year 1984.

Fiscal year 1986 ADP 5,322 0 44

EDUCATION AND TRAINING HEALTH CARE

QUESTION: What is the total amount of the Professional Update Training program for fiscal year 1984 through fiscal year

1986? How many people participate in this program during the same time period? What is the reason for the $416 thousand increase in fiscal year 1986?

ANSWER: The Professional Update Training program for fiscal year 1984 was $3,678 thousand, for fiscal year 1985 is $3,768 thousand, and for fiscal year 1986 will be $4,282 thousand. This funds approximately 4,700 trips in fiscal year 1984 and fiscal year 1985 and 5,300 trips in fiscal year 1986. The increase in fiscal year 1986 is to provide the training for additional health care officers authorized in fiscal year 1985 and requested in fiscal year 1986. Professional Update Training is essential to maintenance of proficiency in the various health care specialties and to maintaining the credentials of these professionals.

Marine Corps Training Equipment

QUESTION: Your training budget includes $491 thousand for O&M costs for first time deliveries of equipment. Provide the type of equipment, the quantities, which quarter the equipment is being fielded, and the costs associated with each type of equipment.

ANSWER: New equipment for specialized skill training, costs per equipment and budgeted delivery dates are as follows:

Equipment/ Item	O&M Cost ($000)	Delivery Date	Qty
Marine Corps Automated Test Equipment System	$ 75	Aug 1985	33
Battery Charger, PP7286	7	Jan 1985	7
AN/AVS Battery	20	Jan 1986	186
Radio Set Battery, PRC-68	17	Jun 85/Jan 86	916
TSEC Keying Battery	3	Jan 1986	55
Modular Universal Laser Equipment (MULE)	74	Mar 1986	236
Launcher, Assault Rocket MOD 0 (SMAW)	27	4th Qtr FY 1985	42
Machine Gun, MK-19	18	4th Qtr FY 1985	67
Sat Comm Terminal, TSC-96	66	Oct 1985	1
Radar, TPS-59	391	Oct 1985	8
Digital Comm Terminal, PSC-2	367	Nov 1985	40
Light Squad Automatic Weapon, M249 (SAW)	30	1st Qtr FY 1986	340
Position Location Reporting System (PLRS)	100	Aug 1986	1
M90 Radar	6	4th Qtr FY 1983	2
TOTAL	$1,201		
FY 1985 Program	-710		
Budgeted FY 1986 Program	$ 491		

Delivery dates shown reflect the start of fielding for the fiscal year 1986 time frame which covers delivery to all activities/schools during the fiscal year. The M90 radars have been stored at MCLB Albany, GA and are just now being fielded to the schools.

Marine Corps Flight Training

Question: Since flight training loads are declining 12%, why is there no related program decrease in funds requested for flight training?

Answer: The 12% reduction in the FY-86 Pilot Training Rate (PTR) will not show in the Marine Fleet Readiness Squadrons (FRS) until FY-88. This is because the FY-86 PTR throughput won't finish basic flight training for approximately 1-2 years. Additionally, previous years excellent recruiting efforts have created a significant backlog of aviators awaiting assignment to the FRS. The current FY's 88 and 89 FRS training requirement decreases 8% and 23% respectively from the FY-86 budget request.

New Programs

QUESTION: Does the Marine Corps have plans to conduct any new training programs in FY 1986? If so, give a brief description and funding profile.

ANSWER: The major change in Marine Corps training programs for fiscal year 1986 is in the General Purpose Forces budget activity for the planned exercising of the Maritime Prepositioning Ships (MPS) Program. In fiscal year 1986, the first two MPS squadrons will be fully deployed, requiring an increase of $8.1 million for a total of $17.4 million for the operational exercising of these two squardons, as well as for the third MPS squardon, which will initially deploy during fiscal year 1986. This funding will provide for the transportation of the Marines engaged in the exercises, incremental exercise costs for petroleum, oil, and lubricants, the replacement/replenishment of equipment and cosumable supplies, and the Fleet Marine Force maintenance of exercised equipment prior to its return to the MPS ships. There are no other major changes in Marine Corps training programs for fiscal year 1986.

The MPS exercise funding profile is:

($ THOUSANDS)

FY 1984	FY 1985	FY 1986
-0-	$9,272	$17,390

EMPLOYER HEALTH INSURANCE INCREASES

QUESTION: Please provide the estimated cost increases related to health insurance, the methodology for calculating such costs and the amount absorbed by appropriation.

ANSWER: The following is the FY 1985 estimated increased health insurance costs for the active operation and maintenance (O&M) appropriations:

	FY 1985 ($ in Millions)
Army	4.5
Navy	1.6
Marine Corps	.2
Air Force	2.3

The Office of Personnel Management (OPM) issued revised contribution rates effective 1 January 1985 for the various health insurance plans included in the Federal Employees Health Benefits Program. The Services and some of the Defense Agencies develop a weighted average increase for each plan and then multiply this weighted average times the number of enrollees. The remainder of the Defense Agencies do not calculate separate costs for health insurance. They estimate total benefits costs based on a percentage of total pay costs. Based on past experience their health insurance costs are approximately 18.5% of the total benefits costs.

The increased costs in health insurance are being absorbed.

REIMBURSABLES

QUESTION: Within the reimbursables to other accounts in the O&M requests are the costs associated with the industrial fund pay raises. Please provide any other costs included in this category by source and requirement.

ANSWER: All of the reimbursables to other accounts included in the Army, Marine Corps, and Air Force active O&M appropriations are the costs associated with the industrial fund pay raises.

The FY 1985 Supplemental Appropriation requested by the Navy includes $145.1 million in the reimbursables to other accounts of which $140.4 million is for industrial fund activities. The remaining $4.7 million is for support services such as: grounds and building maintenance and administrative and professional services purchased by Navy organizations from other Navy organizations, as well as from other Department of Defense components and other governmental agencies. The offset for payments to others can be found in the reimbursements from other accounts, which for the Navy amount to $6.7 million, an amount well in excess of the $4.7 million identified in the reimbursables to other account. The difference between the two accounts represent amounts reimbursed to the Navy for support services provided to other DoD components and other government agencies.

For the Defense Agencies, of the total amount of $3.099 million identified as payments to others, only minor amounts are associated with industrial fund pay raises. Most costs in this category relate to Interservice Support Agreements whereby the agency, as a tenant at a host's location, reimburses the host for base support services provided the agency.

CIVILIAN PERSONNEL AVERAGE COMPENSATION

QUESTION: What is the total O&M cost or savings associated with changes in average compensation not due to pay raise?

ANSWER: The following is the total O&M costs or decreases associated with changes in the FY 1985 average compensation not due to pay raise for the active O&M appropriations:

	(TOA in Millions) FY 1985
Army	-50.4
Navy	+4.9
Marine Corps	+2.5
Air Force	+18.1
Defense Agencies	+23.5
Total	-1.4

QUESTION: Please explain why savings in this category are not used to offset pay raise requirements.

ANSWER: The Army employed its decreases in average compensation to cover the cost of increased workyears to support actual utilization, employer increase cost for health insurance, increases associated with the cash awards and performance awards programs, and adjustments associated with foreign currency fluctuation.

For the other Services and most of the Defense Agencies there is no decrease associated with a change in average compensation; therefore, nothing is available from this category to offset the pay raise requirements.

For the Defense Agencies (DMA, DLA, OSD, and DAVA) that did experience a cost decrease of $11.4 million, the decreases were used to support other high priority mission essential requirements within the Operation and Maintenance, Defense Agencies Appropriation or to absorb unbudgeted and unprogramed requirements such as the Comptroller General decision to obligate the entire amount of the PCS costs in the year the PCS order is initially established vs. the year when actually incurred, as was past practice.

FUNDING SOURCES FOR COSTS OF ADDITIONAL MANYEARS

QUESTION: What funding sources were used to provide for costs of civilians associated with additional manyears not included in the original request?

ANSWER: The Army has increased the FY 1985 Operation and Maintenance (O&M) estimate for direct hire civilian manyears by eight manyears. Since this increase is a net adjustment among the classified, wage grade, and foreign national pay categories and because of the differences in the rates of pay for the various positions involved, the Army was able to finance the additional manyear requirement within existing funding.

The Navy increased the FY 1985 estimate for direct hire civilian manyears by 142 manyears in O&M and 980 manyears in the Industrial Fund. The majority (119 manyears) of the O&M increase is due to functional transfers which are funded in FY 1985 by the account from which the functions were transferred and initially budgeted. The increased Industrial Fund direct hire manyears reflect recent actual experience of operating without ceiling constraints, which allows greater flexibility to perform funded workload in the most economical manner and to improve work force management practices. The increased manyears will insure an efficient balance of manpower to the revised funded workload projections. The source of funding is from lower priority programs.

The Marine Corps and the Air Force have decreased their O&M manyear estimates for direct hire civilians in the current estimate from the manyears included in the original request.

Some of the Defense Agencies accommodated the additional requirement with internal O&M, Defense Agencies assets by below threshold reprograming actions, but the majority is reflected in the formal prior approval Reprograming Request FY 85-16PA currently before Congress for consideration.

CIVILIAN PAY SUPPLEMENTAL REQUIREMENTS

QUESTION: According to summary tables, the FY 1985 budget request included 1,093,335 civilian workyears while the FY 1985 current estimate is up 2,145. What if any portion of this increase was directed by the Congress? Please explain any other changes by appropriation tracking from the 85 request to the appropriated level to the current estimate.

ANSWER: Congress did not explicitly direct any direct hire civilian workyear increases for the active O&M or Industrial Fund accounts.

The following is a track of the direct hire civilian workyears for the active O&M appropriations and the Industrial Fund accounts:

	(Workyears)	
	O&M	Industrial Fund
Army		
FY 1985 Request	205,908	69,844
FY 1985 Appropriated	205,908	69,844
Internal Reprogramings	+8	
Revised Workload Projections		-3,047
FY 1985 Current Estimate	205,916	66,797
Navy		
FY 1985 Request	123,270	179,557
FY 1985 Appropriated	123,270	179,557
Functional Transfers	+119	-49
Impact of A-76 Decisions in FY 1984	-331	-323
Shipyard Workload		-2,833
Public Works Functions		+803
Engineering Activities		+602
Laboratories		+3,284
Military Sealift Operations		-328
Physical Security Enhancements	+83	
Naval Investigative Service	+30	
Kings Bay, GA Support	+28	
Adjust Supply Activities Based on FY 1984 Experience	+400	
Plant Representatives Offices (NAVPROS)	+52	
Miscellaneous Workload Adjustments	-239	-176
FY 1985 Current Estimate	123,412	180,537

	O&M	Industrial Fund
Marine Corps		
FY 1985 Request	16,706	1,501
FY 1985 Appropriated	16,706	1,501
Functional Transfers	-7	
Impact of A-76 Decisions in FY 1984	-5	
Update Workload Estimates	-6	+64
Productivity Improvements		-100
FY 1985 Current Estimate	16,688	1,465
Air Force		
FY 1985 Request	144,210	45,945
FY 1985 Appropriated	144,210	45,945
Management Headquarters Reductions	-125	
Workyear Utilization Adjustment	-65	
Foreign National Workload Adjustment	+4	
FY 1985 Current Estimate	144,024	45,945
Defense Agencies		
FY 1985 Request	86,718	
FY 1985 Appropriated	86,718	
Investigative and Audits Activities*	+333	
Intelligence and Communications	-84	
DoDDS*	+994	
Other Activities	-384	
FY 1985 Current Estimate	87,577	

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* The additional manning requirements for the Defense Investigative Service, the Defense Contract Audit Agency and the DoD Inspector General are in direct support of investigative and audit requirements that Congress has supported in the past to reduce fraud, waste and abuse within the department. Also, the additional requirements for DoDDS are in direct support of increased student enrollments at our overseas locations.

QUESTION: What is the justification for such large increases in civilian workyears between the FY 85 request and the current estimate. Please provide the pay cost by appropriation associated with civilian personnel changes.

ANSWER: The following is the net increased direct hire civilian workyears and associated pay cost changes for the active O&M appropriations and the Industrial Fund accounts that occurred between the FY 1985 request and the current estimate:

(TOA in Thousands)

	O&M		Industrial Fund	
	WY	$000	WY	$000
Army				
Internal Reprograming	+8	+3,973		
Workload Revisions			-3,047	-90,176
Navy				
Functional Transfers	+119	+3,108	-49	-1,539
Impact A-76 Decision in FY 1984	-331	-7,944	-323	-7,752
Shipyard Workload			-2,833	-88,194
Public Works Functions			+803	+10,984
Engineering Activities			+602	+19,402

(TOA in Thousands)

	O&M		Industrial Fund	
	WY	$000	WY	$000
Navy (Cont'd)				
Laboratories			+3,284	+88,428
Military Sealift Ops			-328	-13,634
Physical Security Enhancements	+83	+1,906		
Naval Investigations Service	+30	+991		
Kings Bay GA Support	+28	+698		
Adjust Supply Based on FY 1984 Experience	+400	+9,662		
Plant Representatives Offices (NAVPROs)	+52	+1,672		
Miscellaneous Workload Adjustments:				
U.S. Work Years	+142	+3,924	-176	-4,224
Foreign Direct Workyears	-381	-2,335		
Marine Corps				
Functional Transfers	-7	-168		
Impact of A-76 Decision in FY 1984	-5	-120		
Update Workload Adjustments	-6	-144	+64	+3,025
Productivity Improvements			-100	-2,800
Air Force				
Management Headquarters	-125	-3,375		
Workyear Utilization	-65	-1,755		
Foreign National Workload Adjustment	+4	+36		
Defense Agencies				
Investigative and Audit Activities	+333	+11,324		
Intelligence and Communication Activities	-84	-3,131		
DoDDS	+994	+25,598		
Other Activities	-384	-12,360		

PAY ABSORPTION

QUESTION: In past years the Defense Department has absorbed a portion of the civilian personnel pay raise. By appropriation for the operations and maintenance please show what portion of the FY 85 pay raise requirement was absorbed and explain funds available for offsets.

ANSWER: The following are the operation and maintenance appropriations that are absorbing part of the pay raise:

($ in Thousands)

	Total Requirement	Absorption	Additional Funds Required
O&M, Air Force	124,239	3,939	120,300
Defense Mapping Agency (DMA)	8,957	1,396	7,561

	($ in Thousands)		
	Total Requirement	Absorption	Additional Funds Required
DoD Dependent Education School (DODDS)	20,936	19,062*	1,874
Armed Forces Information Service (AFIS)	146	7	139
Civilian Health and Medical Program of the Uniformed Services (CHAMPUS)	219	37	182
Office, Joint Chiefs of Staff (OJCS)	284	31	253
Court of Military Appeals	45	45	-
Total Including Teachers Pay Raise	154,826	24,517	130,309
Total Excluding Teachers Pay Raise	136,196	5,887	130,309

* Includes $18,630 for Teachers Pay Raise which was, in accordance with usual practice, requested and provided for in the President's budget for FY 1985.

It is the Department's policy to absorb as much of the approved pay raises as possible without reducing program levels previously approved by the Congress for national security.

The proposed absorption in the Air Force is primarily the result of delays in hiring employees, hiring temporary instead of permanent employees, and reductions in anticipated overtime and cash awards.

DMA is able to absorb some of the pay supplemental because of the decrease in average compensation which is primarily the result of replacing a large number of retired employees with less senior lower salaried employees.

PAY ABSORPTION

Air Force

Any absorption would be accommodated by reducing contractual funding for Real Property Maintenance (RPM). Accordingly, a reduction to civilian personnel pay requirements would result in a corresponding increase in the BMAR.

Defense Agencies

A programmatic assessment of the impact of such absorption cannot be made with any degree of accuracy at this time. The impact on any single agency will depend on how manpower intensive the agency is, what mission priorities could be adjusted to accommodate the absorption, what new information is available concerning unanticipated program builds or slippages and whether the agency has programs such as real property maintenance or supply benchstocks that could either allow for absorption or slippage without impairing mission accomplishment.

DODDS' absorption is the result of items such as supplies and equipment costing less than originally projected.

AFIS financed part of their pay supplemental with the savings from buying supplies and materials in volume.

The proposed absorptions by CHAMPUS, OJCS, and the Court of Military Appeals are primarily the result of delays in hiring personnel.

QUESTION: Please explain the programmatic changes necessary to allow for absorption of 5, 15 and 25 percent.

ANSWER: The following chart identifies the amounts the active O&M appropriations would have to absorb under a 5, 15, or 25 percent reduction to the FY 1985 Supplemental Request.

(TOA in Millions)

	Supplemental	5%	15%	25%
Army	200.4	10.0	30.1	50.1
Navy	230.8	11.5	34.6	57.7
Marine Corps	10.6	.5	1.6	2.7
Air Force	120.3	6.0	18.0	30.1
Defense Agencies	106.5	5.3	16.0	26.6

Army

The programmatic effect of absorbing these dollar amounts would be to defer scheduled maintenance of equipment (Depot Maintenance) and real property (backlog of maintenance and repair - BMAR). Both of these areas can accumulate a backlog. However, accumulating a higher than planned backlog by deferring maintenance in FY 1985 will require increased costs in future years to accomplish the same workload. Costs will increase due to price growth and further deterioration of real property before it is repaired. Both of these areas, if reduced, have a direct adverse effect on Army readiness and preclude the Army from meeting the congressional containment level for BMAR.

Navy/Marine Corps

Precise identification of program to be deferred is always difficult due to the fact that efforts are being made to fully execute the FY 1985 program as passed by the Congress. If supplemental funds are not available, candidates for absorption will be late FY 1985 depot maintenance inductions. For example, two private sector ship overhauls are budgeted at a total of $63 million and are planned for award in September. Deferral of one would approximately equate to a 15 percent pay raise absorption; deferral of two would approximately equate to a 25 percent absorption.

CIVILIAN MANPOWER

QUESTION: It is apparent from the justification material that wage board personnel are decreasing and classified schedule personnel increasing in FY 1985 over previous estimates. Is this because "blue collar" type requirements are decreasing and "white collar" requirements increasing?

ANSWER: DoD manpower requirements are directly related to force structure, missions, and workloads. Therefore, in FY 1985 blue collar personnel are decreasing while white collar personnel are increasing due to the Department's changing missions and increased technical/administrative workload associated with those missions. As an example, workload in the naval shipyards is phasing down. This causes a significant reduction in blue collar personnel in order to adjust to the reduced workloads.

Excess FY 1985 Retired Pay Accrual Funds

QUESTION: Provide an audit trail of changes in the Military Retired Pay Accrual line from the FY 1985 request to the current FY 1985 figure resulting from a decrease in the accrual percentage to 50.7 and reductions to the FY 1985 manyear request. Also specify where these excess funds were applied.

ANSWER: The following display provides an audit trail of the military retired pay accrual cost from the FY 1985 column of the 1985 President's budget to the FY 1985 column of the 1986 President's budget.

	Accrual Costs ($ in Mil)
FY 1985 Col. of 85 Pres. Budget	16,913.3
FY 1985 Col. of 86 Pres. Budget	17,215.1
Difference	+301.8
Jan. 85 4 percent Pay Raise	+499.0
Jul. 85 3 percent Pay Raise	+128.2
Congressional strength reduction and changes in manpower mix	-217.3
Normal Cost Percentage (NCP) change from 51.0 percent to 50.7 percent	-108.1

The excess funds related to the change in the Normal Cost Percentage (NCP) from 51.0 percent to 50.7 percent were applied to the January 1, 1985, military pay raise.

QUESTION: Is it correct that none of the FY 1985 Military Retired Pay Accrual funds determined to be excess to requirements will be used for any purpose other than to offset the January 1, 1985, military pay raise?

ANSWER: Yes, the entire amount was applied to the FY 1985 military pay supplemental requirement.

PCS TRAVEL REDUCTIONS

QUESTION: The Committee has indicated its expectation that savings of $100 million could be achieved in the permanent change of station travel program in FY 1985 if the Department of Defense adopted recommendations included in its PCS study of September 1983, which would be used to help offset FY 1985 supplemental requirements. Provide a breakdown of PCS savings achieved in FY 1985, by service, type of travel, and amount applied as FY 1985 supplemental offsets.

ANSWER: Of the 19 recommendations contained in the 1983 PCS Study only two were adopted. The Services are in the process of implementing these recommendations. While there were no savings in FY 1985, it is anticipated that these two initiatives will result in a savings of less than $10M.

QUESTION: Why wasn't $100 million in savings realized as a result of adoption of these Department of Defense permanent change of station travel recommendations?

ANSWER: The Study Group in their report recommended that 19 initiatives be implemented. Of these, 14 were administrative in nature with no dollar savings involved. Of the remaining five, the Department implemented two of the initiatives with a dollar savings of less than $10M. The remaining three initiatives were not implemented because shortening of selective overseas tour lengths; requiring unaccompanied first-term soldiers to serve tour lengths in excess of 24 months; and limiting initial enlistments to no more than 4 years would all have an adverse impact on immediate readiness and long term retention.

MANPOWER REDUCTIONS

QUESTION: Dr. Korb, you may very well be faced with a budget freeze in the Defense Department, and I would like to ask you for some guidance on reducing the FY 1986 manpower request. What are your funding priorities?

ANSWER: The President's Budget provides a balanced program for defense. We obviously feel that the amount of our request is more than justified by the threat to US interests. If Defense receives less than the requested amount, my funding priority is to maintain a balanced overall Defense program. Specifics would depend upon how a budget freeze would affect the rest of Defense. We must have sufficient manpower to fill the force structure. Moreover, we must not neglect the training, compensation and quality of life programs that keep our people proficient, motivated and with us.

QUESTION: In 1980, there were 2,040,000 active military and 916,000 direct hire civilians in the Defense Department. By 1985, these had increased by 112,000 military and 86,000 civilians. Considering this growth, why are additional increases necessary?

ANSWER: As you well remember, we inherited an armed forces that was in a sad disarray when we entered office. We have done much to correct these deficiencies over the past four years, but we still have some distance to go. The increases between 1980 and 1985 have rectified some shortfalls in requirements that existed when we entered office, and are also required to operate, maintain, and support the weapon systems (aircraft, tanks, missiles, ships) and commitments requested by the President and approved by the Congress in previous years. As you also know, the Congress has denied over 60% of our requested increase in military manpower for 1984 and 1985, leaving us with shortfalls. We have reviewed, revised, and adjusted where possible in order to man our essential forces and functions. The additional increases are still considered necessary to operate, maintain, and support the systems still entering the force structure and to reduce existing shortfalls. The consistent undermanning of the force will have an effect upon the readiness and capability of the force. We solicit your support for the requested active component and civilian manpower necessary to adequately man the expanding force structure, which is designed to meet the threat.

QUESTION: Included in the preliminary plan of the Senate Armed Services Committee both military and civilian employees would be reduced significantly. Can you tell the Committee what critical defense functions would have to be curtailed or eliminated to meet the manpower reductions?

ANSWER: First of all, no functions now performed by the Department of Defense would be completely eliminated. Some would have to be curtailed. Generally, the support activities of all of the Services will continue to bear the brunt of undermanning. This is so we can keep the manning levels of Strategic and Tactical/Mobility Forces as high as possible. However, we may start to see the reappearance of high levels of borrowed military manpower where some service members assigned to tactical units must to be diverted from combat training to perform support functions. The actual redistribution of reduced FY 1986 manpower levels would have to be accomplished in connection with the FY 1987 Budget formulation.

QUESTION: If these proposed reductions are approved by the Congress, how will the Defense Department reduce its manpower, by streamlining bureaucratic layering or decreasing force structure?

ANSWER: Our top priority remains the manning of our combat forces; however, it must be recognized that in order to control and support these forces, we must have a net work of headquarters for command and control and a support structure.

We are constantly searching for ways to streamline the Department of Defense and keep "overhead" to a minimum. Each of the Services and JCS have modern and effective programs to control the size and composition of the staffs of their subordinate commands and support activities. These programs employ recognized industrial engineering and industrial management techniques. Considering the functions that must be performed, the locations where these functions must be performed, and the effectiveness of the control programs, there is now little opportunity for major manpower savings in the command and support structures of the Department of Defense.

QUESTION: What percent reduction in manpower could be achieved without cutting force structure?

ANSWER: We believe we have developed a balanced program. That means the manning levels we have programmed and requested are balanced with the force structure. Therefore, there is little opportunity for large manpower cuts without throwing our program out of balance.

We develop our force structure to meet the potential threats we see facing this country around the world. As part of this process we take prudent risks, because we cannot afford all of the forces we might want to counter the threats. Further, we decide what force structure can be in the Reserve Components and what must be in the Active Component. Once all of these constraints have been applied, we require each of the Services to program to man their force structure at an aggregate level of 90%. For FY 1986 the aggregate programmed manning across the four Services is 90.4%. Our Strategic Forces are programmed at 97.9% manning, Tactical/Mobility at 93.4%, Auxiliary Activities 86.3%, and Support Activities at 85.7%. These figures show that we are already undermanning Support Activities in comparison to Strategic and Tactical/Mobility Forces to meet our objective of 90% aggregate manning. Of course, we could simply lower the objective, and the same force structure would require less people. However, we believe that this is unrealistic, because each organization is carefully designed to perform certain missions. Combat units must perform their missions

24 hours/day, 7 days/wk. The lack of assigned personnel quickly becomes a serious problem.

Another more insidious effect of undermanning force structure is the effect on morale. The workload generally remains the same, therefore the people assigned must get it done. People are required to work longer hours and leave becomes unavailable. This eventually results in low morale and retention declines. It is doubtful that significant manpower savings can be achieved without seriously unbalancing the current Defense Program.

CIVILIAN WORKFORCE

QUESTION: What percent of civilian workforce provides hands-on maintenance?

ANSWER: As of December 1984, the Defense Department had 161,000 wage board employees performing "hands-on" maintenance. That equates to 16.7 percent of the on-board civilian employment for that month. This number includes only those employees who are actually turning wrenches, it does not consider other employees who provide essential support to these maintenance workers. The number does not include people in tool cribs, working forklifts, processing paperwork, supervising, etc. Each facet of the work force depends on the other facets for the successful completion of the Department's readiness missions.

CONSOLIDATION

QUESTION:. Mr. Secretary, I understand the Navy has decided to eliminate the headquarters of the Chief of Naval Material and will consolidate the Naval Electronics Command within other components. Could the other services accomplish such consolidations within their acquisition communities?

ANSWER: Each of the Services have different organizational arrangements and missions, so what the Navy has done in this regard might not be directly transferable to the Army and the Air Force. However, these Services are currently examining the Navy's initiative to determine its applicability to their own acquisition organizations. When the reviews are completed, the results will be given careful consideration and, if realignment is appropriate, such action will be taken.

MILITARY/CIVILIAN PAY AND BENEFITS

QUESTION: Last month, the CBO issued a report comparing military and civilian take-home pay in 1974 and 1985. In every case the military member was shown to have a significantly higher disposable income, and in every case this advantage over civilians has increased since 1974.

While you may not agree with CBO's figures, you can't deny the pro-military trend. How do you justify your request for a 3 percent military pay raise and a 5 percent civilian pay decrease?

ANSWER: There are fundamental differences between the military and Federal civilian personnel systems. These differences require separate compensation programs tailored to each personnel system's unique force management requirements. This was borne out by the experiences of the late 1970's when, unlike Federal civilians, the military had extreme difficulty attracting and retaining personnel. This situation made it necessary that the military receive higher pay raises than Federal civilians in order to correct the manning problems. Having reestablished competitive pay for military personnel through significant pay raises in 1980 and 1981, future military pay raises should roughly match private sector pay raises in order to remain competitive for manpower.

Manning problems have not occurred in the Federal civilian work force as they have in the military. There is evidence that the comparability system used to determine Federal civilian pay raises has resulted in compensation levels which are competitive with the private sector. Given these considerations, we believe that the difference in pay raises for our civilian work force and military personnel is fair, contributes to the national defense of our country, and is in keeping with our responsibility to American taxpayers to provide them cost-effective government services.

QUESTION: In view of your increased efforts to civilianize the Department of Defense, aren't you worried about the adverse impact of a pay reduction on civilian hiring and retention?

ANSWER: The Defense budget reflects a five percent reduction in civilian pay in FY 1986 as part of an Administration effort to reduce the deficit. The Department supports the Administration's policy and will carefully monitor the effects such a pay cut will have on our ability to attract and retain people with the required skills, occupations, and experiences. However, we do not believe a five percent pay cut will undermine a proficient work force. Significant "exodus," if any, will be with personnel in the first and last five years of employment.

QUESTION: Dr. Korb, you maintain that the military and civilian pay systems cannot and should not be compared, but your statement requests "long-sought equity" between the two in the dependent student travel program.

Why are military and civilian comparisons fair for PCS reimbursements, health and dental benefits, and student travel and not for pay?

ANSWER: The request for "long-sought equity" between military and civilian personnel in the dependent student travel program is based upon our belief that there is simply no justification for civilian employees to be provided a more generous benefit in this area than military personnel. Having said this, it does not follow that a logical extension of this argument is that military and civilian personnel should receive identical total compensation packages. We continue to believe that there are fundamental differences between the military and federal civilian personnel systems which require unique compensation packages tailored to the requirements of each system.

VARIABLE HOUSING ALLOWANCE

QUESTION: Dr. Korb, last year you testified that VHA reform would save $135 million in FY 1985. Your latest estimate shows savings about half that ($70-80 million). Can you explain to the Committee why only a portion of the savings materialized?

ANSWER: Our latest estimate is that we will save approximately $90 million in FY 1985 as a result of the reform of the VHA program. The reduction in savings from the original estimate of $135 million in the VHA study last year is attributable primarily to an increase in funding requirements for basic allowance for quarters (BAQ).

QUESTION: In FY 1986 you are requesting an 11 percent VHA increase even though housing inflation is expected to be 5.2 percent. Aren't we now tying VHA increases to inflation?

ANSWER: Yes, VHA rate increases are now tied to housing inflation. However, the funding increase required for VHA in FY 1985 is greater than housing inflation because of an increase in end strength and because the revised VHA rates established in FY 1985 will be effective for a full fiscal year. (In FY 1985, the rates were revised in January and thus were effective for only nine months.)

VHA "SMOOTHING" INCREASES

QUESTION: GAO has informed the Committee that your staff adjusts VHA rates so that even when housing costs decline, VHA rates do not decrease. Are you aware of this technique done through computer "smoothing"?

ANSWER: The GAO is not correct. Housing costs have trended steadily upward since VHA was first authorized and VHA rates reflect the growth. However, the survey data reveals that in isolated places and in certain pay grades housing costs have occasionally decreased. In these cases, there has been a decrease in the VHA rates. In fact, in FY 1985, the VHA rate change resulted in a decrease in housing compensation for members in one or more pay grades in about a third of the localities for which separate VHA rates are computed.

QUESTION: Another "smoothing technique" used by your staff increases Generals' VHA so they are paid more for housing (BAQ + VHA) than Colonels and so forth down to privates regardless of how much they spend. If VHA is paid to offset high housing costs, why are you using this technique which overpays higher ranked personnel and costs taxpayers an additional $17 million?

ANSWER: It is not true that the VHA computation increases anyone's VHA rates regardless of their costs. The routine called "pay grade smoothing" was designed to be a zero cost technique over the long run. The $17 million effect observed by the GAO, if real, is a short-term variation in the data.

QUESTION: Because VHA increases are supposed to be tied to inflation the effect of these smoothing techniques is to penalize the junior enlisted members whose absorption increases. You defend VHA because of the needs of enlisted members, but you reward officers. How can you explain this paradox?

ANSWER: It is not correct that the VHA rate computation shifts funds from junior enlisted members to officers. The routines built into the VHA rate computational model pool data where the amount of data is inadequate to compute such techniques directly. Over the long run these techniques sum to zero compared with the product the model would produce without the enhancements.

HOUSING ABSORPTION COSTS

QUESTION: Under current VHA junior enlisted personnel pay a higher portion of their income for housing than officers. Would you support a policy whereby all Service members absorb an equal portion of housing costs as a percentage of salary (RMC)?

ANSWER: Empirical data shows that in the American economy as a whole housing costs as a percentage of income decline as income increases, so it is not surprising or unusual that junior enlisted personnel pay a higher portion of their income for housing than officers. The current VHA entitlement is based on the concept that military members should absorb an equal percentage of the median housing costs incurred by all members in any particular grade. We believe this policy, which recognizes that housing costs as a percentage of income decline as income increases is reflective of American society, is equitable to military personnel, and should be retained.

QUESTION: Wouldn't this be more equitable and ease the housing problems of your junior enlisted members?

ANSWER: It would not be more equitable if an increase in housing allowances for junior enlisted members was made at the expense of the career force. While such a policy might ease the housing problems of junior enlisted members, it could create retention problems by making the pay of career personnel less competitive and thus lead to a loss of these valuable, experienced members.

RENT PLUS ABUSES IN DOD

QUESTION: Dr. Korb, the Defense Inspector General has reported significant abouses have occurred in the rent plus program in Alaska and hawaii. Most of the abuse resulted from policy decisions from the Defense Department. How did this program get out of control?

ANSWER: Although the DoD IG audit identified areas of administrative and management weaknesses and lack of controls to eliminate abuses in the RPHA program, these were not the result of specific policy decisions, but rather the lack of sufficient regulations to manage the program. Many of the recommendations made in the DoD IG report have already been implemented. The DoD rent Plus Study Group has found the basic Rent Plus system is a sound, viable system and the most effective housing allowance for Service members stationed overseas, including Alaska and Hawaii. We have therefore elected to retain the current Rent Plus system and make the necessary administrative and management changes required to fine-tune it.

QUESTION: What actions are you taking to reform rent plus and can you assure the Committee these reforms will be more significant than the VHA reforms we have discussed?

ANSWER: We have distributed the DoD Rent Plus Study to the DoD Services for their comments which we expect to have very shortly. We plan to combine their recommendations with those from the DoD to audit of Rent Plus in Alaska and Hawaii to formulate the changes necessary to control and administer the Rent Plus program properly. As stated above, many of these changes have already been made.

QUESTION: I understand changing from rent plus to VHA in Alaska will actually cost more. Are you aware of this situation and can you explain why this is the case?

ANSWER: The DoD Rent Plus Study Group, using the latest survey data available from a VHA survey for both Alaska and Hawaii, found that changing to VHA in Alaska would actually cost 2.7% more (or 663,000). This surprising result is caused by two factors which inflate the VHA rate for Anchorage and Fairbanks. First, there is an unusually large percentage of Service member homeowners in Alaska. This increases the VHA rates for all members but, under current decision rules, does not influence the RPHA ceilings. Second, the survey data contain very few without dependent data points. Since the VHA with dependent rates are higher than the without dependent rates, the resulting VHA costs, relative to RPHA, are higher than otherwise might be expected.

NEW GI BILL

QUESTION: Dr. Korb, I understand you support starting the new GI Bill even earlier than July 1, but this committee has yet to see a funding request for fiscal year 1985.

How do you propose to pay for the Defense portion of the new GI Bill in FY 1985?

ANSWER: In order to accommodate the 1 July start date of the new GI Bill, the FY 85 Service budgets were rebalanced. A portion of the added costs will be funded from within available appropriations, with the balance to be funded by transfers (reprogrammings) into the pay accounts. This realignment, reflected in the 1985 column of the FY 86 budget, has been submitted to the appropriate Congressional Committee for approval. H.R. 752 which would change the start date of the new GI Bill has not been enacted. For this reason no source of funds has been identified to finance implementation of the program earlier than 1 July.

PCS REIMBURSEMENTS

QUESTION: Your FY 1986 request for permanent change of station travel is almost $3 billion, including $640 million in new allowances.

How do you justify your request for PCS program growth of over 25 percent in one year?

ANSWER: The current authorized reimbursement rates for PCS moves are for less than the actual cost to the individual Service member and every study in recent years has shown this unfavorable condition to be true beyond question. While improvements have been made for federal civilian employees, our Service members still absorb significant out-of-pocket costs. We believe it is time to provide equity for our dedicated men and women in uniform and the initiatives we have included in the budget will help us do that.

QUESTION: I agree with your statement that individual Service members should be fairly reimbursed for government-directed moves, but can you tell the Committee why it should cost the government two and one-half times more to move an officer than it does to move an enlisted?

ANSWER: The assertion that it costs the government two and one-half times more to move an officer than it does an enlisted member is overstated. Both categories receive the same rate of reimbursement for mileage and per diem (except enlisted members' rate of per diem is reduced by the amount of their basic allowance for subsistence (BAS), as required by law). The main difference hinges on the amount of the dislocation allowance, which is paid at the rate of the member's basic allowance for quarters (BAQ), and the levels of weight allowances, which are set according to grade. The following is an example of two members, one enlisted and one officer, making a 600-mile PCS move within CONUS:

PCS Reimbursement Comparison
600-Mile PCS, Two Days Travel Authorized, Members Plus
Spouses and Two Children (Ages 10 and 14)

	E-7	O-5
*Mileage and Per Diem	$285.00	$295.00
DLA	372.60	552.30
TOTAL	$657.60	$847.30

* Mileage = 15¢ per mile
Per Diem = Dependents under 12 - $.035 per mile; 12 and older - $.07 per mile

QUESTION: Last year the conferees directed that if a mileage allowance increase were deemed necessary in FY 1985, funding should be derived from curtailing PCS moves, with a report from the Secretary of Defense before implementation.

What is the status of this program?

ANSWER: There was no requirement for the Department to report to the Congress prior to implementing a mileage increase. Accordingly, the Services implemented the new rates in October 1984 with corresponding instructions from ASD(MI&L) that they identify reductions in PCS travel required to fund the increased mileage allowance. The Secretary of Defense subsequently informed the Chairmen of the Appropriation Committees of the Department's action. The Services have since fulfilled the intent of Congress by initiating a number of program changes sufficient to fund the increased mileage allowance.

SELECTIVE REENLISTMENT BONUSES (SRB)

QUESTION: I understand that at least one out of every five eligible enlisted personnel would be receiving either initial or anniversary selective reenlistment bonus payments if your FY 1986 request of $633 million is approved.

Wasn't this program designed to retain service members in critical, undermanned skills?

ANSWER: Yes and that is how it is being used. DoD-wide, we have programmed for a total of 297,906 Selective Reenlistment Bonus (SRB) payments, which includes 68,361 new payments for FY 1986. The number of new payments represent only a 5% increase over the new payments in FY 1985. Anniversary payments continue to increase each year as a result of the change in the method of payment in FY 1982 from full lump sum to the half lump sum at reenlistment with the remainder paid in equal annual installments. The Services continually review their bonus skills to insure that they are meeting the criteria for award of the bonus. Bonuses are removed from a skill when the shortage condition has been alleviated.

QUESTION: Your FY 1986 request of $364 million for new reenlistment bonuses is up by 32 percent over FY 1984.

With the reenlistment rate for enlisted personnel at historically high levels, why is this program still growing?

ANSWER: One reason for the increase in the selective reenlistment bonus request in FY 1986 is the need to improve manning in critical positions where shortages are projected to become more severe as the Services modernize. Another reason is the need to stem losses in marketable civilian skills to offset effects of an improving economy. We agree that enlisted retention is at acceptable levels. However, in recent months the trends have leveled off and rates are actually declining in some of the Services. While we have enjoyed an extended period of favorable retention, we continue to have skills with persistent shortages. These are typically the skills which are highly marketable in the civilian community or those which involve arduous or unpleasant duties. The Services have also been modernizing the forces with attendant need to retrain people to meet the new requirements.

BASE CLOSURES

QUESTION: Mr. Secretary, the Secretary of Defense has provided a list of bases to Senator Goldwater as possible candidates for closure. Included are 10 Army, 4 Air Force and 8 Navy facilities. Are you familiar with this list and can you recommend closing these facilities?

ANSWER: Yes, I am familiar with the list. However, as Secretary Weinberger has stated, the Defense Department has not recommended any base closures in the 1986 budget. This decision was made because closing installations involves a large one-time cost, and the Department felt it had higher priorities for the required funds. The list of bases given to Senator Goldwater was provided solely as an illustration of the types of installations that might be considered for closure if Congress were to pass legislation expediting the closure process and if funds required to relocate people and equipment and design and construct facilities at new locations were added to the Defense budget. These funds are required because the missions performed at these sites are essential and, if the bases were closed, would have to be carried out elsewhere. Alternate sites have not been identified since the list was only illustrative. Analyzing various closure options, to include determining realistic estimates of construction costs at potential receiving locations, would require six months of full-time work.

MANPOWER REDUCTIONS

QUESTION: Closing these facilites would eliminate 87,560 military and civilian positions. Wouldn't this be one way to achieve the manpower reductions proposed by the Senate Armed Services Committee plan?

ANSWER: Without a doubt, closing installations does save some manpower. However, when looking at a base closure, it must be recognized that most of the functions will be moved somewhere else, and that only the base operating support itself will completely disappear. Therefore, the number of spaces likely to be saved by a base closure program of the magnitude discussed by some is likely to be much smaller than 88,000. Base closures result in long term savings, but in short term expenditures. Facilities must be built or modified at other installations to accommodate functions that must be retained and moved. Relocation costs also occur. In spite of these short term costs, we advocate base consolidations and closures when they make good operational and economic sense. However, if we embark on such an effort, many tough and unpopular decisions will be necessary. We will need the support of Congress.

MWR

QUESTION: Mr. Secretary, there are 18,417 full time military and civilian employees funded by the taxpayers to provide morale, welfare and recreation support to military personnel. Considering the desire to curtail personnel to critical defense functions, isn't this an area which could be reduced?

ANSWER: The Department of Defense operates morale, welfare, and recreation (MWR) activities on virtually all of its 900 installations in the Fifty States and 350 installations overseas. We are the only federal agency with a major responsibility for housing, feeding, clothing, and providing community programs for our people. These community programs include libraries, parks and playgrounds, sports and athletics, youth activities, and similar programs generally funded from tax revenues by local jurisdictions in the United States. Additionally, the Department operates military exchanges, open messes (clubs), bowling centers, golf courses, child care centers, and a wide variety of other activities as a part of its MWR program. The Department has regulations governing the funding and staffing of these activities. Generally, those funded with tax dollars in the civilian sector are funded from defense appropriations; while MWR activities with commercial counterparts in the civilian sector are funded from nonappropriated funds (NAF). Relatively more appropriated fund support is authorized overseas than in the continental United States. We believe our policies regarding taxpayer versus user support of MWR activities are equitable.

The morale and welfare of our military personnel are directly related to military readiness and I am not prepared, as a matter of policy, to say that appropriated funded personnel assigned to MWR activities should be reduced. The Military Services operate these activities, and our policy is for them to "exert continuing efforts at all echelons to minimize the scope and magnitude of appropriated fund support (for the MWR program)." Where operating efficiencies and economies can be realized through management actions, personnel will be reduced accordingly.

QUESTION: The total appropriated support for morale, welfare and recreation activities amounts to $1.4 billion. These activities generate profits of $2.75 billion. Why can't the government's contribution to these efforts be reduced and more profits be used to provide support?

ANSWER: The $2.75 billion is total nonappropriated fund expense, exclusive of cost of goods sold -- not earnings (profit). Therefore, the total cost of the MWR program is $4.15 billion, the sum of $1.4 billion appropriated fund support, and $2.75 billion nonappropriated fund support. Military exchange earnings of $331 million are used in part ($182.5 million) to support morale, welfare, and recreation activities. Additionally, locally generated revenues from package stores and from activities with user fees are being used to fund a large share of the program. There are limits to our earnings potential, and it is unlikely that earnings can be increased to the point of reducing the government's contribution. Our target population and patron base is finite, and demand for MWR products and services is highly elastic. We try to encourage participation in wholesome recreational activities and to offer savings in our resale systems which contribute to the quality of service life. Attempts to maximize earnings through increased prices or decreased services will have a counter effect to our basic objective. Any increase in earnings that we are able to generate over the next decade will be needed to reduce an already large backlog of MWR construction projects, which must be funded with nonappropriated funds.

QUESTION: Isn't this an area where reductions could be made without significantly damaging national defense?

ANSWER: Troop support and particularly community-type activities are always areas where reductions are considered. Their impact on defense -- on readiness -- is more subtle and frequently deferred. But as military personnel and their families find their quality of life impacted, morale decreases, reenlistments fall off, and we begin to feel the long-term affects of neglect of our people. I am certainly prepared to make selective reductions where they make sense, but as a general proposition I believe our attention to morale, welfare and recreation activities over these past few years has significantly improved the quality, discipline and readiness of our forces.

RECRUITING AND ADVERTISING

QUESTION: Dr. Korb, you state that the Department of Defense needs 3 percent program growth in total recruiting and advertising resources, yet the budget requests 10.7 percent real program growth.

ANSWER: The 10.7 percent estimate of program growth does not consider all recruiting and advertising resources. It excludes funds for enlistment bonuses, military personnel pay and allowances, recruiting facility leases, telecommunications, and training. The real program growth for active force recruiting programs is $42.2 million or 3.7 percent. The following table provides the complete recruiting and advertising resource breakout by category and Service for FY 1985 and FY 1986:

ACTIVE FORCE RECRUITING RESOURCES ANALYSIS
FY 1986 VS FY 1985

	FY 1986 Request	Program Growth	Inflation/ Annualization	FY 1985 Program
Army				
Enlistment Bonus	115.4	+ 5.0	- 3.1	113.5
Military Pay	189.1	+ 1.7	+ 7.3	180.1
Civilian Pay	26.9	+ 0.1	- 1.4	28.4
Advertising	93.6	+ 8.3	+ 3.8	81.5
Support	168.5	+ 9.0	+ 7.0	152.5
Subtotal	593.6	+24.1	+13.6	556.0
Navy				
Enlistment Bonus	12.1	+ 2.8	- 1.8	11.1
Military Pay	143.4	+ 7.5	+ 5.8	130.1
Civilian Pay	11.8	+ 0.9	- 0.3	11.2
Advertising	23.3	+ 1.7	+ 1.0	20.6
Support	53.7	+ 0.8	+ 2.3	50.6
Subtotal	244.3	+13.7	+ 7.0	223.6
Marine Corps				
Enlistment Bonus	8.6	+ 0.2	+ 0.5	7.9
Military Pay	84.8	0	+ 3.7	81.1
Civilian Pay	4.3	0.1	- 0.1	4.4
Advertising	18.1	+ 2.8	+ 0.7	14.7
Support	35.9	- 0.5	+ 1.6	34.8
Subtotal	151.7	+ 2.5	+ 6.4	142.8
Air Force				
Enlistment Bonus	0.6	0	- 0.5	1.1
Military Pay	71.2	+ 0.5	+ 2.3	68.3
Civilian Pay	7.4	0	- 0.3	7.7
Advertising	17.6	0	+ 0.8	16.8
Support	28.5	0	+ 1.3	27.2
Subtotal	125.3	+ 0.5	+ 3.6	121.1
Joint Programs				
Advertising	22.0	+ 4.6	+ 0.8	16.6
Market Research	2.3	0	+ 0.2	2.1
Rectg Facilities	69.5	- 3.2	+ 3.2	69.5
Subtotal	93.8	+ 1.4	+ 4.2	88.2
DoD Total				
Enlistment Bonus	136.7	+ 8.0	- 4.9	133.6
Military Pay	488.5	+ 9.7	+19.1	488.5
Civilian Pay	50.4	+ 1.0	- 2.1	51.7
Advertising	174.5	+17.4	+ 7.1	150.2
Support	358.5	+ 6.1	+15.6	336.7
Total	1208.7	+42.2	+34.8	1131.7

*Note: Numbers may not total due to rounding.

For comparative purposes, retirement accrual was not included in Military Pay.

RECRUITING AND ADVERTISING

QUESTION: Why are Marine Corps requests for Recruiting and Advertising increased 3% and 22% respectively while accession goals are down by 11%?

ANSWER: Total enlisted accession goals for FY 86 are projected to go down 6.9% rather than 11%. The Marine Corps' "Total Force" recruiting organization recruits not only non-prior service regular enlisted personnel, but also prior service regular personnel and non-prior service reserve personnel, and the requirement for the latter has increased by 10.9%. While the overall number of required accessions does decrease in FY 86, the combined factors of an improving economy, reduced youth unemployment, and a decreasing 17-21 year-old population will make it necessary for the individual recruiter to develop more contacts per accession than in previous years. Since the Marine Corps has chosen not to increase the size of its recruiting force in order to respond to these more difficult market conditions, it will be necessary to increase the resources available to recruiters. It will also be necessary that quality sources outside the normal high school market be penetrated (i.e.community colleges and vocational schools). To do this will require additional resources targeted at the specific areas in which we need to increase awareness. A further consideration is that media advertising costs have been increasing at the the rate of more than 8% per annum; thus a 22% funding increase will not buy 22% more advertising. Considering the high inflation rate prevalent for several years, the Marine Corps' true advertising purchasing power as well as total dollars available has actually decreased since 1980.

Since the Marine Corps has chosen to address the above recruiting challenge without increasing the size of its recruiting force, to look only at the recruiting and advertising lines in the budget request can provide a somewhat distorted picture. An examination of the total recruiting resources program gives a more balanced perspective. Viewed in this context, the Marine Corps' total budget request contains a program growth of less than 2%.

QUESTION: Can you provide an explanation for the 54 percent increase in the Defense Agencies Advertising request in FY 1986?

ANSWER: The Defense Agencies line includes funding for the Joint Market Research Program (JMRP) and the Joint Recruiting Advertising Program (JRAP). The JMRP which provides market research information for all of the Services increased from $2.1 million in FY 1985 to $2.3 million in FY 1986 to cover inflation.

The FY 1984 JRAP was funded at $20.5 million ($18.5 million, active enlisted programs; $0.4 million, officer programs; $2.1 million, Reserve enlisted programs). In FY 1985, JRAP funding was decreased by almost $2.0 million below the FY 1984 level to $18.6 million ($16.1 million, active enlisted programs; $0.4 million, officer programs; $2.1 million, reserve enlisted programs). This decrease not only failed to adjust for inflation (more than 8% per annum for advertising media) but resulted in additional reductions in media purchasing power. In FY 1986, JRAP advertising funds will be directed at overcoming the downward trend begun in FY 1983 and provide emphasis on meeting accession objectives for the Reserve Component program by increasing its apportionment from $2.1 million (constant since FY 1981) to $7.5 million. The JRAP provides national, corporate-level, awareness-type advertising designed to create within prospects and those who influence them a positive attitude toward military service. The increase in FY 1986 is required for JRAP to accomplish its mission of complementing and supporting Service recruiting efforts conducted in the face of a declining pool of enlistable-age youth and improving economy.

PROFESSIONAL MILITARY EDUCATION

QUESTION: The fiscal year 1986 request includes nearly $200 million in Operations and Maintenance to fund professional military education and 10,350 military end strength. This excludes the military academies. If the cost of salaries and base operations is included. Your annual cost is nearly $1 billion. What critical military requirements are causing such enormous expenditures?

ANSWER: The most critical ingredient in a strong national security position is an officer corps of capable military leaders and managers. The purpose of professional military education is to develop an officer corps with these requisite abilities. Professional military education can be considered the most important type of training or education conducted by the Department of Defense; with a weaker education program, the national security position would be seriously damaged.

The progressive development of the military professional is fundamentally different from that in other professions. Doctors and lawyers exercise the skills they learned in school on a routine, daily basis and thus develop professionally through experience. Military officers also learn from experience, but the experience they undergo in peacetime military training and operations is considerably less than fully realistic. Professional military education helps to alleviate this gap in practical experience so that military officers are prepared as thoroughly as possible for leadership in war.

The amount of professional military education is restricted by limiting the number of officers who attend. Only those officers who share the most promise for further advancement are selected for attendance. Only about half of the officers in the eligible grade groups are selected for education at the intermediate, or command and staff, level. The selection criteria for the senior, or war college, level are even tighter; the officers selected are those considered the most likely candidates to general/flag rank. As as result of the limitations, resources for professional military education are held to the lowest practicable level consistent with education of the required quality.

A clarification should be made on the number of military personnel associated with professional military education. Approximately 7,000 of the military personnel in the program are students; only about 2,400 are members of school faculties and staffs.

QUESTION: The Defense Inspector General says the services cannot justify their requirement for several thousand students trained in professional education programs. What rationale can you provide the committee for funding these programs?

ANSWER: The Defense Audit of Graduate Education Programs (Jun 82-Apr 83) did point out deficiencies in utilization of graduates and determination of requirements. In response to the audit, all the services have established goals to improve utilization within realities of force readiness and operational commitments and have developed a centralized system in each service for ascertaining and validating requirements for advanced academic degrees.

The Army, through the Future Army Requirements (FAR) model, validates positions which are then bounced against utilization factors (50-85 percent depending on grade) to determine the requirement for officers with specified advanced civilian degrees. This requirement, minus the current inventory of qualified officers, identifies yearly objectives. Note that the inventory exceeds the validated positions by design; professional demands (i.e., other assignments, military schooling, etc.) preclude continuous utilization of graduates in validated positions.

The Navy has over 6,200 positions which have ideally been identified to require an officer with graduate education. Considering such factors as attrition, sea/shore rotation, and promotion, an input of almost 1,400 officers per year into graduate education programs would be necessary to bring the inventory up to strength required to fill all validated billets. Because of budget constraints, the Navy in FY 86 plans to send only half that number required to school.

The Air Force has 10,300 personnel positions that require advanced academic degrees (masters or doctorates). At their last review (Nov 84), positions requiring advanced academic degrees were increased by some 1,500. In the field of engineering alone, the Air Force shows a shortage of 1,200 advanced degrees.

Maintaining an inventory of personnel with advanced degrees in a variety of fields is essential if the services are to remain current during this period of technological and social change.

QUESTION: Dr. Korb, can you tell the committee why there is a requirement for four war colleges, three command and staff colleges and seven other professional technical schools among the military services?

ANSWER: The senior military leader must be educated to understand and weigh the economic, sociological, and political implications of decision making. Each service's war college teaches a common-core curriculum which develops an understanding of the national and international environment, the foundation of national security policy, and the decision making process within DoD. The focus of the curriculum at each college is dictated by the tactical and operational environment which is characteristic of that service. Other professional schools provide education tailored to specific educational skills required by follow-on positions.

For example, the Army War College is the single Army institution dedicated to educating senior officers in the conception and formulation of strategy for echelons above the corps.

The National Defense University (NDU), consisting of the National War College (NWC) and the Industrial College of the Armed Forces (ICAF), educates officers to understand the various elements of national power (military, economic, political, etc.). NWC particularly focuses on the application of joint forces to achieve national strategy goals, while ICAF focuses on the development and use of the national industrial base harnessed to support the achievement of these goals. Students at the Air Command and Staff College concentrate on aerospace doctrine and operations, while their contemporaries at the Naval College of Command and Staff delve into maritime issues and scenarios. The Army Command and General Staff College instructs officers in the command and staff skills required to plan and conduct the Air/Land Battle at division level and above.

The acquisition of weapons and other defense systems is one of the most important and costly activities of the Department of Defense. The Defense Systems Management College (DSMC) is chartered to support all of the military services in the education of acquisition professionals, both military and civilian. DSMC also conducts research to support and improve defense systems acquisition program management.

While there are certain common elements in some of these schools, none of them duplicate any of the others. Each school specializes in one or more unique aspects of the military profession.

QUESTION: In addition to these schools the Defense Department will send nearly 2,400 personnel to graduate school in civilian institutions in 1986. Considering the cost of tuition and the salaries which must be paid, the total cost is around $150 million. With a tight defense budget in the coming year couldn't these education programs be reduced?

ANSWER: Graduate education requirements are established by a rigorous review and validation process in each of the services. DoD plans to send nearly 2,400 students to civilian institutions. These civilian institutions offer courses that are not service unique and are not available at DoD institutions. The courses support validated subspecialty requirements in such areas as engineering, supply, public affairs, and law. Reducing input to these institutions would exacerbate already serious inventory shortages in these critical fields.

BUREAURATIC DUPLICATIONS

QUESTION: Mr. Secretary, since there is a Defense Audiovisual Agency, what is the need for the Armed Forces Information Service--Defense Audiovisual Policy Office, U.S. Army Audiovisual Center, Naval Audiovisual Center, and the 1361st Audiovisual Squadron all in the Washington area?

ANSWER: The SecDef has directed disestablishment of DAVA on September 30, 1985 and the transfer of its functions to the Military Departments to support their own requirements and to serve as Executive Agents in support of all DoD Components. Experience with DAVA's operation since 1979 has shown that its functions can be performed more effectively in decentralized operations.

The disestablishment of DAVA in no way reduces the requirements for the four Washington-based activities referred to in the question. These activities perform essential functions in the DoD AV spectrum. Of the four, one, the Defense Audiovisual Policy Office, a part of the American Forces Information Service, fulfills the requirements of OMB Circular A-114 for the DoD, providing management oversight of AV activities. This office implements Public Law and Federal policy for AV activities throughout the DoD through appropriate controls on management and operation. The DAP is itself not an operational activity.

The other three activities referred to in the question are operational elements which provide local and regional service-unique support to their parent Component headquarters and, in certain cases, provide support to JCS, OSD, and the White House. Among the functions now provided are limited documentation; and audio recording. As of October 1, 1985, at least one of them, the Naval Audiovisual Center, will assume Executive Agent responsibilities from DAVA to provide DoD-wide support, as well. The other DAVA activities to be transferred to the Military Services are in Pennsylvania and California.

RECRUITING AND ADVERTISING

QUESTION: Provide a detailed breakdown of the FY 1986 recruiting and advertising funding request in the Operation and Maintenance, Marine Corps, account.

ANSWER: Below is the detailed breakdown of the FY 1986 recruiting and advertising funding request in the Operation and Maintenance, Marine Corps, account:

Recruiting	($mil)
Vehicles (leasing)	$ 11.8
Telecommunications	8.8
ADP Support	.1
Applicant Processing	2.6
Recruiter Asst. Program	2.8
Civilian Pers. Salaries	3.6
Training	.7
Travel and Per Diem	6.2
Recruiter Out-of-Pocket Exp	1.3
Office Support/Furniture/ Miscellaneous	1.7
TOTAL Recruiting	$ 39.6

Advertising	($mil)
National Media	$ 7.6
Local/Regional	3.1
Direct Mail	3.1
Lead Fulfillment	.9
Market Research	.2
Print Mat'l & Literature	2.3
Reenlistment/Retention	.8
Special Projects	.1
TOTAL Advertising	$ 18.1

QUESTION: In FY 1985 the Marine Corps requested $38.5 million for recruiting and $14.7 million for advertising with an active duty end strength increase of 2,084. The FY 1986 request is $39.6 million for recruiting and $18.1 million for advertising with an active duty end strength increase request of 1,200. What is the justification for this funding increase?

ANSWER: As displayed below, the funding increase in recruiting is almost entirely price growth. The recruiting support program increase of $ .1 million constitutes a modest program growth of .2% and is targeted entirely towards improving the effectiveness and efficiency of the individual recruiter through increased mobility. The program growth in advertising is based upon the realization that in the current increasingly competitive market, additional resources need to be provided to the local level in order to enhance the capability of the recruiter to target and exploit specific market areas. Advertising funds are needed to achieve the requisite number of quality recruits (I-IIIA mental groups) needed to man the force. A further consideration is that media advertising costs have been increasing at the rate of 9-10% per annum; thus a $2.8 million program increase will not buy $2.8 million more advertising. In that this high industry inflation rate has been prevalent for several years, the Marine Corps true advertising purchasing power has actually decreased since 1980.

	Recruiting	Advertising
Price Growth	$1.0 million	$ .6 million
Net Program Growth	.1 million	2.8 million
FY 1986 Total Increase	$1.1 million	$3.4 million

QUESTION: Describe the recruiting and advertising activities provided within O&M, Marine Corps for the Marine Corps Reserve and detail, by category, the associated funding.

ANSWER: The Marine Corps Recruiting Service operates on a "Total Force" concept. This means that we use the same personnel and assets to recruit for non-prior service Marine Corps Reservists as we do to recruit for the Regular Marine Corps. The mechanics of recruiting for either the Regular or the Reserve are the same. As a result, the Marine Corps does not budget or account for any particular recruiting or advertising actions as being specifically aimed at "reserves" or "regulars."

QUESTION: The Committee understands the Marine Corps' FY 1986 recruiting goal is 33,294, or 4,097 fewer enlistees than in FY 1985. Is this accurate? If not, please provide the correct figures.

ANSWER: The Marine Corps' utilizes the "Total Force" concept for enlisted recruiting, that is, we utilize the organization (personnel and assets) to recruit not only non prior service (NPS) regulars, but also prior service (PS) regulars and NPS reserves. Shown below are the enlisted recruiting goals for FY 1986 which are only 3,293 less than FY 1985.

NPS regulars	33,294
PS regulars	1,920
NPS reserves	9,000
TOTAL	44,214

However, it must be noted that the requirement to enlist high quality (mental category I-IIIA) personnel will increase to 63% of the accession goal. This is occurring at a time when the recruiting environment is becoming less favorable as a result of declining population of qualified military applicants and an improving economy.

QUESTION: Provide the average term of enlistment, by year, for FY 1980-1984 and thus far in FY 1985.

ANSWER: The chart below shows the average term of enlistment (in years) from FY 1980 through April of this fiscal year.

FY1980	FY1981	FY1982	FY1983	FY1984	FY1985*
3.65	3.71	3.72	3.83	4.01	4.20

* through April

SELECTIVE REENLISTMENT BONUSES

QUESTION: The Committee understands that in FY 1984 the Marine Corps reduced the number of its critically short enlisted MOS skills from 141 to 75. Is this correct?

ANSWER: Yes, however, we have taken an in-depth look at what we have previously defined as a critical skill and have determined that the essence of a definition must have a direct link to readiness of the force. A more realistic definition of a critical skill is "a combat essential skill that is manned at less than 85 percent of requirement (tables of organization) plus trainees, transients, prisoners, and patients which is low C-2 personnel readiness. Based on this definition, we decreased the number of critical skills from 217 to 158 in Fiscal Year 1984.

QUESTION: Provide a list of the current shortage skills and the percent at which each of those skills is manned.

ANSWER: The following is a list of current shortage skills and their manning percentage.

0211	68%
0241	88%
0291	75%
0451	88%
0491	84%
0844	94%
0848	74%
0861	85%
1142	70%
1169	86%
1345	94%
1833	94%
2145	94%
2146	84%
2149	42%
2171	73%
2172	72%
2191	87%
2311	90%
2336	77%
2513	63%
2549	89%
2621	93%
2629	70%
2632	72%
2675	72%
2691	92%
2819	55%
2822	74%
2823	88%
2829	62%
2833	90%
2861	69%
2874	76%
2885	87%
2889	81%
3044	86%
3072	91%
3191	88%
3311	92%
3431	94%
3441	83%
3513	90%
3521	70%
3523	94%
3524	84%
3533	75%
3534	70%
4034	82%
4313	92%
4425	81%
4429	64%
4621	80%
4673	67%
5821	83%
5925	61%
5926	21%
5927	37%
5928	62%
5939	89%
5942	40%
5947	80%
5948	57%
5953	87%
5962	91%
5964	34%
5974	41%
5977	80%
5978	71%
5979	69%
5993	89%
5994	79%
6019	85%
6027	79%
6032	60%
6044	85%
6057	87%
6059	94%
6079	89%
6087	86%
6096	85%
6097	70%
6098	89%
6119	90%
6124	40%
6135	81%
6153	80%
6334	93%
6337	88%
6342	94%
6362	75%
6364	40%
6367	69%
6443	94%
6462	55%
6463	76%
6464	87%
6465	65%
6477	67%
6482	87%
6521	85%
6591	94%
7041	89%
7312	68%

QUESTION: With the Marine Corps meeting its reenlistment goals in FY 1984 and thus far in FY 1985, and the decreasing number of shortage skill areas, what is the justification for the requested $8.9 million increase in new selective reenlistment bonus payments in FY 1986?

ANSWER: The increase in the amount of new payments is required for three reasons. First, the 106 skills that currently have shortages have continued to have these shortages despite the application of reenlistment bonuses. Marines with these skills are generally the most sought after by private employers. In order to encourage sufficient reenlistments in these skills, higher bonuses will have to be applied.

Second, longer enlistments by Selective Reenlistment Bonus (SRB) Marines have raised the amount required to pay new SRBs. The average length of SRB reenlistees was about 4 years in each zone. The average length of reenlistment for a zone A SRB Marine has increased to 4.74 years. The average length of reenlistment for SRB Marines in zone B and zone C have increased to over 5 years. These increased lengths of enlistment cause an increase in the average new payment amount.

Third, raising the SRB ceiling from $16,000 to $30,000 has caused an increase in the projected cost of new SRB payments.

FLIGHT DECK DUTY PAY

QUESTION: By year, how many Marines were performing flight deck duty in FY 1980 through FY 1984? What were the funding levels in each of those years?

ANSWER: The following data is submitted for the record.

FLIGHT DECK DUTY PAY
Dollars in Thousands

	FY 1980		FY 1981		FY 1982		FY 1983		FY 1984	
PERSONNEL	No.	AMT	No.	AMT	No.	AMT	No.	AMT	No.	AMT
Officer	3	$ 4	3	$ 4	1	$ 1	9	$12	23	$30
Enlisted	85	56	89	63	39	39	185	184	510*	508*
Total	88	$60	92	$67	40	$40	194	$196	533	$538

* Research of estimated obligations as submitted in the Budget for enlisted personnel at 265 Marines and $264 thousand was under stated. Actual funding level for FY 1984 is as shown above.

QUESTION: The FY 1986 request of payment of flight deck duty pay to 561 Marines more than doubles the number of payments in FY 1984. What is the justification for this increase?

ANSWER: The actual increase in Flight Deck Duty Pay (FDDP) occured in 1983 as a result of expanding the entitlement of FDDP pay to include duty aboard ships other than aircraft carriers (Uniform Service Pay Act of 1981). This change, effective 1 March 1983, included paying FDDP for launch operations of rotary wing aircraft. The number of Marines entitled to FDDP pay increased from an actual of 36 in February to 428 entitled Marines by April 1983. The actual 12 month average for FY 1984 was 533 Marines entitled to FDDP pay. The last six months average in FY 1985 is 477. Coupled with the usual increase of activity in rotary wing aircraft operations during the summer months, the estimate for FDDP as submitted in the budget is supportable.

QUESTION: Will the number of Marines required to perform flight deck duty continue to increase for FY 1987-1990? Provide a breakdown, by year.

ANSWER: Except for FY 1987, FDDP pay will increase through the program years. This is due primarily to increases in the number of fixed wing carrier-based squadrons. The data is shown as follows:

	FY 1987* Number	FY 1988 Number	FY 1989 Number	FY 1990 Number
Officer	12	16	16	17
Enlisted	407	565	565	613
Total	419	581	581	630

* 2 less F/A-18 squadrons deploying

SPECIAL DUTY ASSIGNMENT PAY

QUESTION: By military skill and payment rate, provide a detailed breakdown of the $13.6 million requested by the Marine Corps for special duty assignment pay.

ANSWER: The table provided below provides the requested breakdown of SDA pay by skill and payment rate.

			SDA PAYMENT RATE			
Skill	$55	$75	$110	$165	$220	$275
Recruiter/Career Recruiter				247	417	2031
Drill Instructor				344	822	
Career Planner				246		
Marine Security Guard			1500			

Changes in the number of personnel receiving each SDA payment rate from the number projected in the President's Budget is required because of standard payment levels for recruiters.

QUESTION: How much of this $7.9 million increase over FY 1985 results from the increase special duty assignment pay rates and how much is associated with the addition by the Marine Corps of State Department Embassy Guards as an area of coverage?

ANSWER: $1.98 million of the increase is caused by the addition of State Department Embassy Guards as an area of coverage. $5.92 million results from higher rates being paid to other personnel who are already eligible for SDA pay.

UNIT DEPLOYMENT PROGRAM

QUESTION: What is the background data on the Marine Corps' Unit Deployment Program?

ANSWER: The Unit Deployment Program (UDP) was initially conceived as a six-phased evolution which commenced in October 1977 and was fully implemented by January 1983. Presently, every infantry battalion and tactical aircraft squadron/detachment in WestPac are provided by the UDP. The primary purpose of unit deployment is to reduce the personnel turbulence associated with 12-month dependents-restricted tours in WestPac and to sustain maximum uniform readiness of tactical units throughout the Marine Corps. Since the implementation of the UDP, the Marine Corps has realized several significant benefits.

(1) Marines are now stabilized in the same tactical units for up to three years. This has led to enhanced continuity of training and increased the "leader to led" association.

(2) The UDP supports standardization and interoperability of the interchangeable parts of a Marine Air Ground Task Force.

(3) Family stability has improved through the reduction of permanent change of station (PCS) moves. The following positive aspects can be expected:

(a) While the Marine is deployed, his family enjoys the benefits of all the support facilities at the homebase (schools, church, social organizations, commissary, P.X., etc.).

(b) Geographical stability saves money for the Marine, since he will not be paying the out-of-pocket expenses associated with a PCS move.

(c) In case of emergency, the family and the Marine have all the necessary means of assistance at their disposal (family services centers, medical and communications facilities).

Costs/Savings

(1) Since implementation of the UDP, 8,300 billets have been converted from one year PCS tours to six month TAD deployments. The conversion reduces rotational PCS moves by 16,600 annually.

(2) From a budgeting perspective, the UDP also provides a net savings to the Marine Corps. The current annual savings realized by the program is in excess of one million dollars. When transient manyear (TMY) savings are included, the savings are dramatic. Since 1977, these savings have provided an aggregate spending reduction of $64.3M to man the Force.

(3) Additionally, with PCS costs rising at a more rapid rate than per diem and transportation costs combined, it would appear that the UDP will continue to provide a cost savings over the PCS method of staffing WestPac units.

Expansion of the Unit Deployment Program

(1) On 24 September 1984, the Commandant approved the expansion of the UDP, to include tank and Assault Amphibian Vehicle (AAV) companies, commencing with tank units in August 1985.

(2) A proposed plan to continue the expansion of UDP to include artillery units has been concurred in by the Headquarters Marine Corps staff and the Force Commanders and it will be briefed to the Commandant in the coming months. If approved, the first artillery unit could rotate in May of 1986.

QUESTION: How many and what type of units are currently included in this program?

ANSWER: The type and number of units currently included in the UDP are:

a. Infantry Battalions (to include 11/13 Marine Amphibious Unit (MAU) and Landing Force Sixth Fleet MAU) - 26

b. TOW Companies - 2

c. CH-46 Squadrons (HMM) - 12

d. CH-53 Squadrons (HMH) - 6

e. AH-1J Squadron (HMA) - 1

f. UH-1E Squadrons (HML) -2

g. VMO Squadrons - 3

h. AV-8 Squadron (VMA AV-8) - 1

i. A-4 Squadrons (VMA) - 3

j. EA-6B Squadrons (VMAQ) - 2

k. A-6 Squadrons (VMA-AW) - 5

l. F-4 Squadrons (VMFA) - 6

m. RF-4B Squadron (VMFP) - 1

n. KC-130 Squadrons (VMGR) - 3

QUESTION: What are the projected growth in numbers and types of units included in this program through FY 1990?

ANSWER: The projected growth for the Unit Deployment Program is:

a. Tank Companies - 12 (commencing in FY85)

b. AAV Companies - 11 (commencing in FY87)

c. AV-8 Squadrons (VMA AV-8) - 4 (commencing in FY88)

d. F-4 Squadrons (VMFA) - 6 (commencing in FY87)

QUESTION: Annually for FY 1984 through FY 1990, what are the anticipated decreases in rotational moves and corresponding cost savings associated with the Marine Corps' Unit Deployment Program?

ANSWER:

a. Decreases in Rotational Moves

(1) FY84 - By FY 1984, 16,600 PCS moves had been eliminated
(2) FY85 - 200
(3) FY86 - 546
(4) FY87 - 1618
(5) FY88 - 1818
(6) FY89 - 0
(7) FY90 - 0

Total decrease in rotational PCS moves since the program's inception in October 1977 is 20,782.

b. Cost Savings

(1) FY84 - 0
(2) FY85 - $ 87,934
(3) FY86 - $ 484,063
(4) FY87 - $2,002,887
(5) FY88 - $2,351,034
(6) FY89 - 0
(7) FY90 - 0

ACCOMPANIED TOUR PROGRAM

QUESTION: Please provide background information on the Marine Corps' Accompanied Tour Program, to include rationale for its inception, detailed data regarding its current implementation worldwide, and projected long-range scope (through the 1990's).

ANSWER: In FY 1983 the Commandant announced a major policy relative to the assignment of career Marines to accompanied tours in Japan. The intent was to reduce the frequent separations from families that Marines must face over the course of a career, by gradually increasing the opportunity for accompanied tours on Okinawa and at Iwakuni. The ultimate goal was to eventually have all married career Marines in Japan in a accompanied status, except for Marines in unit deployment billets, i.e., Marines assigned to ground and aviation combat units. The policy will increase morale, improve retention and, because of the stability afforded by having more Marines on longer accompanied tours, enhance readiness of units throughout the Marine Corps.

The Accompanied Tour Program is growing by more than 200 families annually and is dependent on the growth of family support facilities such as schools and family housing units in overseas areas. The governments of Japan and the United States are jointly committed to a family support facilities building program. The program is projected to allow conversion of over 4000 overseas billets in Okinawa and Iwakuni from unaccompanied to accompanied by FY 1994; however, failure by either government to meet projected building milestones would reduce or delay the conversion. The following chart shows the projected growth in Okinawa accompanied tours through FY 1995:

FY85	FY86	FY87		FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95
1495	1720	1938	Min	2163	2388	2613	2838	3063	3288	3513	3738
			Max	2338	2738	3138	3538	3838	4138	4381	-

QUESTION: For FY 1980 through FY 1985 (by year and location) provide the number and types of officer and enlisted billets converted from unaccompanied to accompanied status.

ANSWER: Accompanied billets are not specifically indentified by type other than officer or enlisted. Any career Marine may serve an accompanied tour. Most conversions shown below have taken place on Okinawa.

	FY80	FY81	FY82	FY83	FY84	FY85
Officer	-	-	29	53	60	67
Enlisted	-	-	66	122	140	158
Total Billets	800	800	895	1070	1270	1495

QUESTION: How many and what types of officer and enlisted billets, by location are scheduled for conversion in FY 1986 and FY 1987?

ANSWER: Accompanied billets are not identified by specific type other than officer or enlisted. Most conversions shown below will be on Okinawa.

	FY86	FY87
Officer	67	66
Enlisted	158	152
Total Billets	1720	1938

QUESTION: What are the additional costs, by category and year, of execution of this program for FY 1984 through 1987?

ANSWER: The only additional Marine Corps' costs are Temporary Lodging Allowance expenditures, as shown below:

	FY84	FY85	FY86 ($mil)	FY87	Total
TLA	.5	.7	.9	1.0	3.1

QUESTION: What are the associated cost savings, by category, for the same time period?

ANSWER: Associated cost savings for rotational PCS moves (officer and enlisted) are:

	FY84	FY85	FY86	FY87	Total
Savings ($M)	3.6	4.2	5.1	6.4	19.3

TRAINING TRAVEL

QUESTION: In the Marine Corps' FY 1985 justification material, 4,917 enlisted member training moves were estimated for FY 1984. The actual FY 1984 figure was 4,327, as reflected in the FY 1986 justification. What caused this decrease in the training moves requirement in fy 1984?

ANSWER: During the last quarter of FY 1984 more Marines moved to and from overseas (rotational moves) than was originally projected. A percentage of these moves was to and from school, thereby reducing the number of moves classified as training moves. This coupled with an estimation error in the FY 1985 justification material caused the decrease in actual FY 1984 training moves.

QUESTION: The Marine Corps is requesting an increase of 500 enlisted member training moves in FY 1986. What are the increased training requirements associated with these additional moves?

ANSWER: Increased quality of Marine recruits, continued emphasis on lateral moves into short skills, the level load accession program, coupled with less attrition from schools of 20 weeks or more has produced fewer missed school seats and has allowed us to maximize training of enlisted Marines thus increassing the training move requirement.

QUESTIONS SUBMITTED BY SENATOR MCCLURE

ACTIVE RESERVE MIX

QUESTION: Is there a Defense Department plan to restructure our Armed Forces toward reduced personnel costs by reducing regular force manning levels, and offsetting these reductions with expansion of equivalent reserve forces?

ANSWER: As a matter of policy, the Defense Department considers doing any job first with people from the private sector, next with Government civilians, then reserve component personnel and only as a last resort with active component people. The specific criteria for making the active-reserve mix decisions are outlined in the FY 1986 Defense Manpower Requirements Report. During each program and budget review the individual services apply these criteria to determine their active and reserve requirements. Although there is no predetermined target we are shooting for, for every increase in active component strength programmed over the FYDP, the Selected Reserves increases will be over twice as much.

READINESS

QUESTION: In manpower intensive forces, such as ground forces, how much degradation of readiness might be expected by a shift, say to a mostly reserve Continental U. S. Army force?

ANSWER: We have moved in the last couple of years to a situation where the majority of the Army in the United States is a Reserve Component force. In the FY 1986 President's Budget, the active Army end strength is 780,000 and the combined strength of the Army Reserve and Army National Guard is about 751,000. With about 263,300 active Army troops stationed in foreign countries,that makes about 59 percent of the Army stationed in the U S (including Alaska and Hawaii) reserves.

We believe that the active/reserve mix that we have in our program is about what we need to provide the proper level of readiness. Of course, active forces are more ready than reserve forces because they have a much more intensive training program. We also need a certain percentage of active forces in the U S to respond to emergencies, act as an immediately available strategic reserve, and provide a rotation base for Army personnel stationed overseas. A major increase in the Army Reserve Components beyond current levels and a corresponding reduction of active forces in the U S would result in a force incapable of performing these functions, and overall readiness would be reduced below acceptable levels.

ACTIVE-RESERVE MIX

QUESTION: While it is more expensive to deploy any forces overseas rather than in the U.S., could more U.S. Army units be deployed overseas, and replaced with reserve units in the U.S.? What would be the cost trade-offs in such a scheme?

ANSWER: No, we can not deploy more U.S. Army units overseas and replace them with reserve units in the U.S. for the reasons discussed in the previous question. Furthermore, to do so would exacerbate the space-imbalance problem in the Army caused by over one third of its force already deployed overseas.

RESERVE FORCES

QUESTION: Can reserve forces be made more attractive for recruiting by reasonable pay incentives which might be necessary in a major restructuring of forces toward an augmented reserve force?

ANSWER: With the support of the Congress, we have in recent years implemented reserve forces' pay and benefit incentives such as Selected Reserve enlistment and affiliation bonuses which have helped us to increase substantially the number of recruits into the reserves. In order to maintain and build upon our successful strengthening of the reserve forces, we are considering legislation in FY 1986 to improve these very effective programs. For example, the proposed legislation would raise the cash enlistment bonus ceiling from $2,000 to $5,000 for a six-year commitment in a designated Selected Reserve unit or skill, would raise the monthly incentive pay for Service members with a remaining military service obligation who join a reserve component unit from $25 to $75 per month, and would implement a new incentive pay of $5,000 for unobligated prior Service members who join designated reserve component units or skills for six years. We believe that with the continued support of Congress for carefully targeted and cost-effective pay incentives such as those outlined above, we can achieve our recruiting objectives for the reserve forces.

MILITARY RETIREMENT PAY

QUESTION: Retirement pay for the military is now on the order of $18 billion. What would be the advantages of shifting this cost to the Veterans' Administration?

ANSWER: There would be no advantage to shifting those costs to the Veterans' Administration given the fact that military retired pay is now under an accrual budgeting system. As of October 1, 1984, 1984, the government costs for retired pay to members already retired was transferred from the defense function of the budget to the income security function of the budget. With this transfer, the $18.3 billion needed to pay retired members in fiscal year 1986 is not part of the Department of Defense budget. Rather, that government outlay is reflected as an expenditure of the Military Retirement Fund established at Department of Treasury under the income security function. The only retirement expense appearing in the Department of Defense budget is the accruing cost of future retirement costs for the service of members currently on active duty. This represents the funds that would have to be set aside today to pay for retirement costs in the future. This accrual cost is $18.2 billion for fiscal year 1986, is included in the Department of Defense budget, and when appropriated, is transferred from the Department to the Military Retirement Trust Fund at Treasury. This is an intergovernmental fund transfer within the unified budget and does not represent an outlay expense to the government.

QUESTION: Some retired military officers have stated publicly that their retirement pay is too generous, and that they would be willing to forego automatic cost-of-living increases if these savings could be applied to deficit reduction and increased national security. Among the several proposed schemes for reform of military retirement, what are the pros and cons?

ANSWER: Undoubtedly, there are rare instances where a retired member may be able to offset a cost-of-living suspension with other income sources. However, we know that over 48 percent of the retired force is receiving retired pay below the poverty level for a family of four. To suspend adjustments for this segment of the population would cause an even greater financial hardship.

QUESTIONS SUBMITTED BY SENATOR STENNIS

RUDMAN PROPOSAL ON END STRENGTH

QUESTION: Do you think it will be possible to execute the reductions in civilian strength in 1986 as proposed in Senator Rudman's plan without a Reduction In Force (RIF)?

ANSWER: It would not be possible to execute the FY 1986 civilian manpower reductions as proposed in Senator Rudman's plan without a Reduction In Force (RIF). The DoD work force, like any large work force, does experience significant turnover each year. However, the turnover rates (accessions and separations) vary by job type. As an example, the turnover rates for doctors, other medical personnel, and secretaries are more than twice the turnover rates for engineers, pipefitters, and aircraft workers. Attrition would, therefore, incur severe reductions in some areas and inadequate reductions in other areas. We would have to selectively RIF in order to keep a balanced work force.

QUESTION: If a RIF is required, do you think you can achieve the savings projected in 1986 for civilian personnel?

ANSWER: The Department would not be able to achieve the FY 1986 savings projected by the Rudman proposal, even if we initiate a Reduction In Force. The very implementation of a RIF is costly, increasing movement and "bumping" of personnel. The costs of severance pay and unemployment benefits and other ancillary costs would also eat into the proposed savings.

QUESTION: Please provide a detailed estimate of the savings that would accrue, if you were required by Congress to execute the Rudman plan in 1986 for 1986 and beyond.

ANSWER: At this time, it is not possible to provide a detailed estimate of the savings that would result from implementation of the Rudman plan. Reductions the size and scope of those proposed in the Rudman plan would require a major reassessment of the Department's workloads and missions to determine where the least damage would be made to readiness.

MANPOWER SALARY SAVINGS

QUESTION: Would there be any offset savings to the Rudman proposal? That is, would there be cost increases in other areas that would offset the direct manpower salary savings?

ANSWER: Yes, there would have to be cost increases in other areas to offset the direct manpower salary savings in the Rudman proposal. Beside the immediate cost of a Reduction In Force (RIF) which includes processing employees through the work force (bumping), there would also be separation pay and unemployment compensation costs. In addition to these costs, if the funded workload remained at current levels, the Department would be forced to rely on uneconomical use of temporary employees, uneconomical use of overtime, and additional reliance on contractual support.

If funded workload is reduced, that is, dollars will be cut along with the end strength; then the Department will have to reduce total operations; i.e., flying hours, steaming hours, and other readiness-related efforts. However, actual FY 1986 will be accomodated in the FY 1987 Budget formulation.

PRODUCTIVITY GAINS

QUESTION: In determining both civilian and military manpower requirements, is there any annual process or procedure to ensure that manpower requirements reflect productivity gains?

ANSWER: The Defense Planning, Programing, and Budgeting System (PPBS) is the process used within DoD to ensure that manpower requirements reflect productivity gains. The annual

Defense Guidance contains specific guidance on application of OMB Circular A-76, Efficiency Reviews, Productivity Enhancing Capital Investments, Interservice Support, and other productivity initiatives. The actual application of this productivity guidance appears in Service POM's and budgets. In the past, the Department has distributed a portion of its civilian manpower resources according to Service performance of productivity initiatives. The Department also reports annually on the results of its Productivity Enhancing Capital Investment Program.

MANPOWER REDUCTIONS

QUESTION: In your statement on page three, you suggest that, if Congress constrains active duty manpower growth in 1986, as it did in 1984 and 1985, readiness will be degraded because much-needed new programs will be undermanned. Given such a reduction, which new programs will be undermanned and how will this affect readiness?

ANSWER: When this administration came into office, it embarked upon a major program to rebuild and modernize the Armed Forces. We are in the middle of that effort right now. Because this effort includes new weapons systems, ships and aircraft, additional people are needed. These increases are primarily:

- to expand the Navy to 600 ships.
- to man new weapons systems in the Air Force, such as the B-1B, KC-10 and ground launched cruise missile.
- to man new equipment in the Marine Corps.

We have ordered new equipment in the anticipation of getting the required manpower when the equipment came into the inventory. Our requested increase in military end strength for FY 1986 is to man new equipment already approved and in procurement.

If we do not get the increases to cover this additional equipment, we will distribute the manpower shortages that will exist across the entire force structure. This obviously will adversely affect personnel readiness because units will be manned at lower levels. Additionally, undermanning of support activities which provide services such as training, whole-sale logistics, and depot maintenance will have a ripple effect throughout the force. Graduates of training programs will not be as proficient, logistics will be less responsive and maintenance turnaround times will increase. All of this will adversely affect readiness.

UNDERMANNED PROGRAMS

QUESTION: What programs were undermanned in 1984 and 1985 and how did this affect readiness? Please provide specific details.

ANSWER: The details by Service are shown below.

Army.

The following programs were reduced or undermanned as a result of Congress cutting the Army's request by 2,600 military personnel in the FY 1984 President's Budget.

Organization Effectiveness Program	100
Elimination of 2 Military Intelligence Companies	85
Atomic Demolition Munitions Structure Modification	210

Force Structure Reductions in Europe	293
Deferral of Unit Activations	525
Other Force Structure Reductions	1387

Navy.

In FY 1984 and FY 1985 Congress cut the Navy request by 7,400 and 4,000 end strength, respectively. In both years, required increases to shore activities had to be deferred to allow adequate manning of new ships and aircraft squadrons. In FY 1984, the Navy took the cuts in such vital fleet support areas as submarine bases, Bangor TRIDENT Refit Facility, airwings, TOMAHAWK and LAMPS programs, Ship and Aircraft Intermediate Maintenance Activities, and medical. Although the precise readiness impact of these cuts cannot be determined, there is no question that when vital support is reduced, readiness suffers. In FY 1985, the Navy could no longer take the reductions entirely from fleet support and 1,000 came from ships and squadrons. This equated to a reduction of about one-half of one percent in manning of ships and squadrons. Each one percent decreases in manning historically results in a three percent decrease in units reporting fully or substantially combat ready. Of the remaining 3,000 reductions, over 500 was taken from medical programs, nearly 200 from ship and aircraft intermediate maintenance activities, about 1,000 from naval and naval air stations, about 200 from fleet communications facilities, and over 600 from training. The majority of the remainder came from deployable fleet commands and naval construction forces. Navy's fleet support activities are now manned at critical levels.

Marine Corps.

The increases in Marine Corps military end strength of 700 in FY 1984 and 1,200 in FY 1985 were to be used to operate, maintain, and support new weapons systems. When these manpower increases were not approved, the Marine Corps applied the decrement across the entire Fleet Marine Force in a proportional manner.

Air Force.

The Air Force reduced 18,000 spaces to remain within the FY 1984 military end strength ceiling imposed by the FY 1984 Authorization Act. Actions included elimination of a planned overlap (to insure mission ready status) as F-106 aircraft were replaced by F-15s in the air defense mission area, early inactivation of an F-4 squadron at George AFB, deletion of ready team backfill, inactivation of Long Range Navigation System (LORAN) and four Air Support Radar Teams in Europe, reduction of prepositioned procurement and aircraft maintenance, reduction in management headquarters, reduction in base operating support, transfer of a planned forward-deployed RED HORSE heavy repair civil engineering team to CONUS-based Air National Guard units, and a programmed undermanning of approximately one percent spread across the Air Force. The 8100 reductions in the FY 1985 military end strength authorization request resulted in a drawdown and transfer to the air reserve forces of an F-4E squadron (18 PAA), reduced satellite remote terminals, a cut of classified programs, and reduced undergraduate flying training. Programs to reduce large wartime shortfalls in security police, medical, and services were also cut. European flight simulators were converted to contract and an overseas weapons training detachment was closed. Significant reductions in enlisted training were combined with cuts in training support; Family Support Centers were reduced, management headquarters were cut, and commissioning programs were decreased.

These reductions in the Service's military end strength requests resulted in lower readiness by eroding the support base upon which readiness and sustainability are built. Doing more with less did not work in the 70's and the Services paid the price in lower readiness and in a huge retention problem from which we recently recovered. Undermanning the force and the reductions imposed when no corresponding decrease in workload occurs translate into less than fully ready Armed Forces.

OFFICER/ENLISTED RATIO

QUESTION: The Congressional Budget Office (CBO), in a recent publication (Reducing the Deficit: Spending and Revenue Options) pointed out that, since its post-Vietnam peak in 1977, the ratio of officers to enlisted has declined from 6.5 enlisted personnel for every officer to about 6.0 per officer in 1984.

CBO states that if, over the next three years, officer strength were reduced so that the ratio was 6.25 enlisted personnel per officer, we could save $90 million in 1986 and $2.7 billion over the next five years. This saving would be achieved by reversing only half of the increase from 1977.

Why does DoD need more officers relative to its enlisted strength?

ANSWER: A GAO letter to the Chairman, Subcommittee on Defense, Committee on Appropriations in September 1982 stated: "We believe that there is very limited value in using the ratio of enlisted-to-officers to measure growth or excess." We agree with GAO's conclusion that "such comparisons have limited usefulness and may produce erroneous judgments about the composition and effectiveness of our military forces." It is the DoD position that the size and mix of the officer and enlisted force shall be determined based upon a detailed assessment of our military requirements. In recent years, equipment modernization and technological advances as well as force structure changes and the maintenance of a larger mobilization cadre have all impacted on the resulting "statistic" of enlisted-to-officer ratio. Likewise, management of high technology systems such as high speed computers, complicated missiles and laser technology for multi-million dollar weapons systems require a greater concentration of management and supervisory personnel and thus has a significant effect on the enlisted-to-officer ratio.

Since the requirements for officers have risen vis-a-vis enlisted requirements, it follows that the ratio has declined. Any imposition upon the officer personnel management system to meet a contrived and arbitrary ratio as a goal detracts from combat readiness. For example, a goal of a 6.25 enlisted-to-officer ratio could be attained without detriment to combat readiness by increasing enlisted personnel end strength by 74,643 relative to FY84 enlisted end strength. Such an action would result in enlisted and officer forces which are still smaller than those for any period from 1951 thru 1973, provide the officer strength needed to meet current force structure needs and attain the 6.25 ratio. However, such a force would be excessive to current force structure needs for enlisted personnel by approximately 74,643 personnel. Accordingly, this action would clearly be a more expensive way to meet our force structure requirements for personnel. Such a goal would supersede personnel management objectives. The result of such artificial numerical manipulation would be to provide the same readiness at a greater cost than that presently programmed which results in the lower enlisted-to-officer ratio of 6.0.

Accordingly, we urge the Committee to support our request for personnel based on the combat readiness that it produces and without the application of artificial ratios such as enlisted-to-officers, etc., which we believe would produce a more expensive, less ready force.

INVESTMENT IN PRODUCTIVITY

QUESTION: In your statement (page 10), you indicate that increases in annual investment in installations and facilities have "raised the productivity of our people." Please provide data to support this statement. Please identify civilian and/or military spaces that have been eliminated as a result of productivity gains.

ANSWER: Because much of DoD's infrastructure is very old (World War II vintage), the Department probably gets no more than 60-70 percent productivity from personnel who are working at poor, outdated facilities. Therefore, replacing obsolete facilities with modern and efficient building/equipment results in improved methods of work accomplishment, and more importantly, people taking pride in what they do.

This point is evidenced through the experience of the Air Force's Tactical Air Command (TAC). TAC spent one billion dollars improving facilities for its people, and through improved productivity, increased the aircraft availability by the equivalent of 336 fighters at an estimated $5.1 billion.

Clearly, the Department gets more from its personnel when they are provided with adequate facilities and better working conditions. However, the Department cannot identify spaces that have been eliminated as a direct result of these types of productivity gains.

EUROPEAN TROOP STRENGTH

QUESTION: In your statement (page 13), you indicate that you need 329,869 U.S. military personnel stationed ashore in the European NATO countries but the statutory ceiling will allow only 326,414, leaving a shortfall of 3,455. Please identify the spaces which will not be manned, if the ceiling is not lifted.

ANSWER: We reduced a variety of programs in FY 1986 to comply with the Congressional ceiling on European troop strength. Specifically, we cancelled the programmed reassignment of a C-130 squadron to Europe, an action which reduced about 800 authorizations, but also eliminated the needed improvement of our in-theatre airlift support. We converted almost 1800 military to civilian authorizations, reducing our ability to augment needed warfighting functions during the initial outbreak of hostilities, and returned an air defense unit to CONUS. Lastly, we will underman our units, not filling about 850 validated positions, which hurts our peacetime programs and our warfighting capability.

QUESTIONS SUBMITTED BY SENATOR PROXMIRE

VOLUNTARY LIFE INSURANCE

QUESTION: Dr. Korb, do you support my legislation to increase the amount of voluntary life insurance military members can obtain from the current limitation of $35,000 to $50,000?

ANSWER: As the Secretary of Defense indicated in his letter to you of September 27, 1984, the Department of Defense supports an increase in the Servicemen's Group Life Insurance (SGLI) maximum amount to $50,000. This was a recommendation of the Fifth Quadrennial Review of Military Compensation forwarded to the Congress in April 1984. That review confirmed the need for a viable and reasonable insurance program for members, as provided by the SGLI. We know the program is successful--over 99 percent of members participate--and it is cost-effective for the government--members' premiums have covered all costs since 1974. We also know that the average amount of life insurance per family in the United States is $56,000--more than the amount being considered. Consequently, the Department believes that an increase of the maximum amount to $50,000 is needed.

CONFLICT OF INTEREST CASE REFERRALS

QUESTION. Current Federal law (Chapter 11, Title 18 U.S.C. Section 208) requires Federal procurement officials to remove themselves from work on contracts involving a company if they are negotiating or making any arrangement concerning prospective employment with that company.

How many Defense Department employees last year asked to be removed from work on a contract for that reason?

How many cases did your office investigate last year for possible violation of this or other conflict-of-interest statutes?

How many cases did your office turn over to the Justice Department for prosecution?

ANSWER: The Military Departments and Defense Agencies may have taken cases to the Department of Justice. The Department's Office of General Counsel, which has responsibility for conflict of interest policies, reports no record of case referrals. At this time there is no practicable way of obtaining detailed feedback. The Office of General Counsel has advised that there is no central record system which would produce information on the number of investigations into employee conduct or work assignment adjustments, if any.

CONFLICT OF INTEREST SITUATIONS

QUESTION: Your office has provided the Congress with figures indicating that for FY-83 companies doing at least $10 million in Pentagon business employed more than 2100 former Defense Department employees who had left Government service within the past three years.

How many of those 2100 employees went to work for companies whose contracts they managed while working for the Government?

Do you see any possible conflicts of interest there?

How many of those same employees started working for a defense contractor within 15 days of leaving the Government?

Do you think it is at least possible that some of those employees were negotiating a job while they were still on the Federal payroll?

ANSWER: During fiscal year 1983, 157 in-house Defense employees shifted to contractor work forces and 89 contractor employees entered the in-house Defense work force. Some 2000 military members shifted to contractor employment during the year. The present reporting form (DD Form 1787) asks for the information required under the statute establishing the reporting procedure, Public Law 91-121 Section 410 (Section 2397 of title 10, United States Code). The Form does not require the reporting individual to reveal any pre-departure responsibilities involving the contractor with whom he or she is now employed or the duration of time between termination of government employment and entry into contractor employment. Thus, it does not appear possible to provide this information without contracting all reporting individuals and asking them to provide it.

An alternative approach would be to identify the Defense Department offices in which these individuals worked during their several years of Government service, and, by review of files and interview of current workers, try to make this determination. We respectfully submit that neither approach would be a prudent investment of Defense Department resources. We acknowledge that the information requested is important to identify areas of possible abuse. It will be required in the future under a regulatory requirement pursuant to the authority of the Secretary of Defense.

CONTINUED MONITORING OF EMPLOYMENT CONFLICTS

QUESTION: Is the Pentagon seeking repeal of P.L. 91-121 Section 410 which is the revolving door reporting requirement for former employees of the Department of Defense?

ANSWER: Serious thought was given to repeal this requirement, however at this time we feel that this requirement is still needed on a continuous basis.

COMPARISON OF LOST DAYS

QUESTION: Several years ago the General Accounting Office reported to me that the average number of days men lose in the military from drug, alcohol abuse and being AWOL was higher than the average number of days women lose from drug, alcohol abuse, being AWOL and being pregnant. Is that still the case?

ANSWER: Insofar as we are aware the General Accounting Office's conclusions were based on a special study performed by the Army in 1978. We do not maintain a data base with which to make a fresh comparison without performing a special study of all Services. Consequently, we are unable to say whether the General Accounting Office's conclusions pertain today.

WOMEN IN THE MILITARY

QUESTION: In view of the fact that women serve as police officers, firewomen, FBI and secret service agents, in the CIA abroad, as pilots and other high risk jobs of service to our country, why should women not be able to volunteer for high risk jobs in the military? (Shouldn't the requirement be who can do the job not what the gender is of the person involved or looked at from the perspective of a potential enemy, are you any less dead if killed in warfare by a women than a man?)

ANSWER: Women can and do volunteer for similar high risk jobs in the military services. For example, women are presently serving as members of the military police, and as pilots and aircrew members. Women are restricted, however, by both statute and related policy, from serving in those skills and positions which would involve their participation in direct combat action. The issue of combat exclusion statutes for women can certainly be seized upon as an emotional one. However, from a policy standpoint, these statutes are accepted as reflecting the will of the American people that women be relieved of the responsibility for participating in direct combat action. Our policy emphasis continues to be the full and equal utilization of women within these constraints.

QUESTION: I understand the Air Force has now opened up its missile silos to women. Is that correct and have any women been assigned to missile silo duty?

ANSWER: Actually, women have been assigned to Titan missile crews as launch control officers since 1977. The recent change announced by the Air Force dealt with opening up the Minuteman and Peacekeeper launch control officer positions to women. Previously, these positions were closed to women primarily because of concerns over privacy and the impact on morale which could result from mixed two person crews being confined for 24 hours in the small, single-room launch control center. The Air Force change will involve assigning women launch control officers duty with other women. The first Minuteman launch control officer class with women is scheduled to convene late this summer, with the first women graduates on duty in early 1986.

STARS AND STRIPES

QUESTION: Do you support the right of Stars and Stripes to print all the news without censorship of any kind?

ANSWER: I support Department of Defense policy regarding Stars and Stripes, which is that a free flow of news and information will be provided to all military personnel without censorship or news management.

QUESTION: Do you think Stars and Stripes reporters should be able to engage in investigative reporting?

ANSWER: Since there is no universally accepted definition of the term "investigative reporting," I cannot respond directly to that question. However, in the generally accepted sense that all professional reporting involves the researching, gathering, and verification of facts related to a given story and the production of a balanced, timely truthful account, I believe Stars and Stripes reporters should follow such practices when develpoing a story for their paper.

QUESTION: Do you think the military commanders should be able to order Stars and Stripes editors to change stories or to limit their coverage of particular items?

ANSWER: Under normal circumstances and outside of the realm of classified subjects or material, I do not. When matters of national security or safety of our personnel are involved, there are appropriate provisions for providing guidance to the editors; but there must be a clearcut and legitimate reason and it must be immediately reported to the Defense Department by the Unified Commander exercising any such authority. The calculated withholding of news that is merely unfavorable, embarrassing or unpleasant is not authorized.

PENTAGON STAFFING

QUESTION: It has often been said that we have overlapping levels of staff in the Pentagon--that the Service Secretaries have staffs that duplicate in some degree the staffs of the Chiefs of Staff and OSD has a staff which duplicates in some degree the Service Secretaries and the Joint Chiefs. Don't you think there is some overlap here?

ANSWER: No, I do not believe there is any significant overlap among the organizations you have mentioned. The fact of the matter is that they each have missions which are quite different from one another.

The Office of the Secretary of Defense is concerned with developing Defense-wide policies, plans, and programs; allocating resources among DoD Components; and evaluating program execution by DoD Components to ensure appropriate Defense-wide integration and compatibility with overall Defense plans and objectives. The staffs of the Service Secretaries are concerned with providing Service-unique perspectives to the development of DoD-wide policies, plans, and programs; overseeing implementation of the resulting decisions within their Services; allocating the Services' shares of DoD resources among their various components; and overseeing the implementation of policies, plans, and programs to ensure that they accomplish their Services' portions of the DoD mission in an effective and efficient manner. The Chiefs of Staff, on the other hand, are concerned with the direction of day-to-day operations and with the associated details of program planning and execution.

Thus, there is a planned distribution of management responsibility from the development of general defense-wide guidance to its refinement into specific implementation activities as it flows down from the Office of the Secretary of Defense through the Service Secretariats, to the Service Chiefs of Staff. Although offices at each level may have similar names and work in similar functional areas, they are not duplicative; rather, they are working on different aspects of the same function.

The Joint Chiefs of Staff perform an entirely different set of functions. Unlike OSD, the Service Secretariats and the Service Staffs, they are not concerned with policy development, resource allocation, and program management. They are responsible for providing strategic direction to the Unified and Specified Commands and for providing military advice to the Secretary of Defense and the President. Accordingly, the Joint Staff is organized along traditional military staff lines to perform these functions and to interface with the headquarters staffs of the Unified and Specified Commands. In this manner, organizational arrangements for the command, control, and employment of U.S. military forces are compatible across all operating elements and activities, thereby ensuring integrated force employment under the supervision of the President and Secretary of Defense.

Experience has demonstrated that the organizational design of the Department's individual components is compatible with, and responsive to, their respective missions. The overall result is an integrated defense organization designed to support the Secretary of Defense in providing direction to the operating forces in the field on the one hand, and on the other hand, serving as the principal manager of defense programs and resources which support those forces.

OVERSEAS STRENGTHS

QUESTION: Dr. Korb: How many people do we have serving abroad, civilians and uniformed, and how does this figure compare with historical data?

How many people are serving abroad outside of Europe?

Can you give us a breakout of personnel by country?

ANSWER: As of the end of FY 1984 we had 510,730 military and 166,384 civilians serving abroad. Comparable strengths at the end of FY 1980 are 480,726 military and 144,694 civilians. Outside of Western and Southern Europe we had 159,047 military and 61,615 civilians as of the end of FY 1984. A breakout of personnel by country as of the end of FY 1984 is as follows:

Regional Area/Country	Military	Civilian	
		Direct Hire	Indirect Hire
Continental U.S. (CONUS)	1,318,968	890,985	0
Alaska	20,662	4,546	0
Hawaii	47,648	20,539	0
Guam	9,175	4,331	4
American Samoa	1	0	0
Johnston Atoll	140	3	0
Puerto Rico	3,877	2,636	0
Trust Territory of the Pacific Islands	102	61	0
Virgin Islands of the U.S.	12	96	0
Midway Islands	12	0	0
Wake Island	6	0	0
Transients	58,362	0	0
Afloat	168,462	0	0
(1) Western and Southern Europe			
Austria	26	10	0
Belgium	2,484	486	662
Cyprus	13	1	0
Denmark	58	17	0
Finland	18	3	0
France	73	30	0
Germany (Fed. Republic & West Berlin)	253,722	28,490	59,571

Regional Area/Country	Military	Civilian	
		Direct Hire	Indirect Hire
Gibralter	3	0	0
Greece	3,711	251	465
Greenland	329	6	0
Iceland	3,117	943	0
Ireland	7	1	0
Italy	14,809	4,102	28
Luxembourg	10	16	0
Malta	0	1	0
Netherlands	2,823	240	386
Norway	226	65	0
Portugal	1,705	1,158	0
Spain	9,436	810	2,007
Sweden	15	3	0
Switzerland	44	4	0
Turkey	5,449	639	0
United Kingdom	28,823	2,970	1,404
Afloat	24,782	0	0
Total-Western & Southern Europe	351,683	40,246	64,523
(2) East Asia and Pacific			
French Polynesia	0	2	0
Australia	746	217	0
Burma	12	1	0
China	23	3	0
Hong Kong	42	17	0
Indonesia	47	29	0
Japan (Including Okinawa)	45,761	3,798	17,312
Malaysia	26	2	0
New Zealand	68	5	0
Papua New Guinea	0	1	0
Philippines	15,319	13,687	7
Republic Of Korea	40,785	14,175	3,251
Singapore	26	29	0
Thailand	105	30	0
Tonga	1	0	0
Afloat	18,338	0	0
Total-East Asia & Pacific	121,299	31,996	20,570
(3) Africa, Near East and South Asia			
Afghanistan	6	0	0
Algeria	8	2	0
Bahrain	98	67	0
Bangladesh	9	1	0
British Indian Ocean Territory (Includes Diego Garcia)	1,253	72	0
Cameroon	8	1	0
Chad	11	0	0
Congo	8	0	0
Egypt	1,048	224	0
Ethiopia	7	0	0
Gabon	6	0	0
Ghana	9	2	0
India	32	11	0

Regional Area/Country	Military	Civilián	
		Direct Hire	Indirect Hire
Israel	77	9	0
Ivory Coast	10	2	0
Jordan	29	5	0
Kenya	39	6	0
Kuwait	28	1	0
Lebanon	25	5	0
Liberia	20	4	0
Madagascar	7	1	0
Malawi	2	1	0
Mali	6	0	0
Mauritius	6	0	0
Morocco	54	9	0
Nepal	8	2	0
Niger	6	0	0
Nigeria	18	7	0
Oman	19	23	0
Pakistan	34	11	0
St. Helena (Includes Ascension Island)	2	0	0
Saudi Arabia	537	1,026	0
Senegal	11	1	0
Seychelles	4	0	0
Somalia	26	3	0
South Africa	20	3	0
Sri Lanka	9	1	0
Sudan	25	5	0
Syria	9	1	0
Tanzania, United Republic of	7	0	0
Tunisia	31	5	0
United Arab Emirates	8	2	0
Burkina Faso	6	1	0
Yemen (Sanaa)	17	11	0
Zaire	30	6	0
Zambia	5	0	0
Zimbabwe	6	0	0
Afloat	13,353	0	0
Total-Africa, Near East & South Asia	16,997	1,531	0
(4) Western Hemisphere			
Antigua	77	4	0
Argentina	19	12	0
Bahamas, The	45	14	0
Barbados	12	2	0
Belize	3	1	0
Bermuda	1,493	416	0
Bolivia	15	7	0
Brazil	48	17	0
Canada	542	183	0
Chile	19	6	0

Regional Area/Country	Military	Civilian	
		Direct Hire	Indirect Hire
Colombia	33	18	0
Costa Rica	14	6	0
Cuba (Guantanamo)	2,347	923	0
Dominican Republic	18	9	0
Ecaudor	22	9	0
El Salvador	51	6	0
Grenada	165	0	0
Guatemala	18	6	0
Guyana	7	0	0
Haiti	12	1	0
Honduras	846	22	0
Jamaica	14	0	0
Mexico	32	7	0
Netherlands Antilles	0	2	0
Nicaragua	10	5	0
Panama	9,354	5,765	0
Paraguay	12	8	0
St. Christopher -Nevis - Anguilla	2	0	0
Peru	26	10	0
Suriname	2	2	0
Uraguay	12	6	0
Venezuela	37	16	0
Afloat	4,787	0	0
Total-Western Hemisphere	20,094	7,483	0
(5) Antarctica	65	0	0
(6) Undistributed	413	0	0
(7) Eastern Europe			
Bulgaria	9	2	0
Czechoslovakia	11	2	0
German Democratic Republic	48	0	0
Hungary	13	3	0
Poland	15	5	0
Romania	14	4	0
Union of Soviet Socialist Republic	51	14	0
Yugoslavia	18	5	0
Total-Eastern Europe	179	35	0
Total Foreign Countries	510,730	81,291	85,093
Total Worldwide	2,138,157	1,004,488	85,097

QUESTIONS SUBMITTED BY SENATOR BYRD

MANPOWER REDUCTIONS

QUESTION: What is your reaction, Mr. Secretary, to the reductions in the Defense Manpower Strength voted by the Armed Services Subcommittee on Manpower and Personnel?

ANSWER: We strongly oppose any cut to our current end strength. A cut of 75,000 military and 100,000 civilians would have a devastating effect on our program. We believe we have developed and presented a balanced program to continue the Administration's effort to improve and modernize the Armed Forces. In FY 1986 we asked for end strength increases of 25,630 military and 19,000 civilians. These additional people are necessary. The lack of these increases alone will cause problems with the program so a cut of 175,000 would, in effect, undo much of what this Administration has done in manpower in the last four years.

QUESTION: What, specifically, in your opinion, would be the adverse impact of reductions on:

Readiness?
Ability to fight a conventional war?
Training?
Intelligence Activities?
Military Medical Activities?
Ability to mobilize Reserve Forces?
Vital communications links?
Necessary oversight of Defense Contracting Activities?

ANSWER: This is a very difficult question to answer with specifics at this time, because we are still looking at alternatives for distributing any cuts. If we do end up with the cuts recommended by the Senate Armed Services Committee, we will distribute the shortages in such a way as to minimize their adverse impact on the force. However, there will be a negative impact, because we will be stretching our personnel resources thinner than we would like to for a balanced program. Tactical units will continue to receive top priority for manning which means that the support structure will continue to be undermanned. With all the increases we requested for FY86, Strategic Forces are programmed to be manned at 97.9%, Tactical/Mobility Forces at 93.4%, Auxiliary Activities at 86.3% and Support Activities at 85.7%. It must be pointed out that there are limits to undermamning the support structure before adverse effects are felt in the tactical units. Because support activities tend to have multiple customers their influence is amplified. For example, if the training base is cut so that each trainee receives less instruction and is less prepared for duties in a tactical unit, then there is an indirect adverse impact on the tactical unit, even though its personnel level remained high. By the same token, if manpower is cut in logistics, it will take longer to get supplies and get equipment repaired. All of this has an adverse effect.

QUESTION: What, if any, would be the estimated adverse impact on the survivability of the soldier, sailor or airman in the field if these reductions were made and armed conflict should break out?

ANSWER: It is impossible to quantify the impact. All functions would continue to be performed except that the whole structure would be weaker than planned. The situation is analogous to a structure whose plans call for certain types and amounts of materials, but in its construction less materials are used and stretched to cover the project. The structure is weaker than originally planned. We are in the same situation. We have a balanced defense program that calls for a certain amount of people. We are getting less, therefore they are stretched thinner. The whole structure is not as strong. As a result, every member is at slightly more risk than if all the planned resources were available.

SUBCOMMITTEE RECESS

Senator **Rudman**. The subcommittee will stand in recess until April 16 at 10 o'clock when we will reconvene to take testimony from the Department of Defense on Navy shipbuilding and conversions.

[Whereupon, at 11:45 a.m., Wednesday, April 3, the subcommittee was recessed to reconvene at 10 a.m., Tuesday, April 16, 1985.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 1986

TUESDAY, APRIL 16, 1985

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10 a.m., in room SD-192, Dirksen Senate Office Building, Hon. Warren B. Rudman, presiding.

Present: Senators Rudman, McClure, Andrews, Kasten, Stennis, Proxmire, Chiles, Johnston, and Sasser; also present: Senator Specter.

DEPARTMENT OF DEFENSE

DEPARTMENT OF THE NAVY (SHIPBUILDING AND LOGISTICS)

STATEMENT OF HON. EVERETT PYATT, ASSISTANT SECRETARY OF THE NAVY (SHIPBUILDING AND LOGISTICS)

ACCOMPANIED BY:

- VICE ADM. JOSEPH METCALF III, U.S. NAVY, DEPUTY CHIEF OF NAVAL OPERATIONS FOR SURFACE WARFARE
- VICE ADM. E.B. FOWLER, COMMANDER, NAVAL SEA SYSTEMS COMMAND

REVIEW OF NAVY SHIPBUILDING AND OVERHAUL PROGRAMS

BUDGET REQUEST

Senator RUDMAN. The subcommittee will come to order.

Chairman Stevens is politically detained this morning. He asked me last week, knowing that, if I would chair and I am glad to do so.

We are here today to conduct a review of the Navy request for shipbuilding and ship maintenance programs in fiscal year 1985.

For these two major programs the request includes over $20.1 billion for ship year industrial work which represents over 20 percent of the budget authority requested for all Navy activities in the coming fiscal year.

In addition, the research and development account includes about $1 billion for shipbuilding-related programs just over the horizon. Collectively these requests are about $4 billion above the fiscal year 1985 appropriated level. Of course, this is 1986 we are talking about.

While the fiscal year 1986 budget authority request is large, the outlays which will be incurred in the coming year resulting from this program are less than $6 billion. But the future outlay impact from today's shipbuilding budget authority is substantial.

With the current budget deficit problems, we are forced to examine substantial new starts and high construction rates which are more and more difficult to sustain.

NAVAL EXPANSION PROGRAM

This shipbuilding budget clearly continues the naval expansion begun 4 years ago to reach the goal of a 600-ship Navy—some say 700 ships—maybe we will ask about that today—and 15-carrier battle groups. Our intent today is to review this objective and its funding requirements in the context of fiscal restraint.

Secretary Pyatt, Admiral Metcalf and Admiral Fowler, we are pleased to have you here today. Your full statements will be printed in the record.

Mr. Secretary, please proceed with your highlighted statement.

Mr. PYATT. Thank you, Mr. Chairman.

EMPHASIS ON COMPETITION

We are pleased to be here again. We would like to review some of the things we have accomplished in the last year.

I think, first of all, in spending money, one of the things we try to do is emphasize competition.

Senator RUDMAN. Excuse me, let me ask Chairman Stennis if he would like to make an opening statement.

Senator STENNIS. Thank you very much.

I think you have opened up well. I just want to hear what these gentlemen have to say. I will pass for now.

Senator RUDMAN. Fine.

Mr. PYATT. One of the things we have been trying to do in spending money is to get more competition into the program. One of the programs in which we have been more successful in doing this is shipbuilding.

Since 1980 we have increased the competitive dollar volume from 15 to 85 percent. This in turn has helped generate the savings that we have talked about in prior hearings. These saving have been applied in prior years to other programs including the MX, resulting in the most efficient use of Defense dollars.

These savings total, as you said, about $2.5 billion. With the award of the DDG-51 not long ago, another couple of hundred million dollars which added to that total. It is now about $2.7 billion.

The key in our shipbuilding industry has been the steps they have taken in the last 5 to 7 years to modernize their facilities and bring in new production techniques. This factor, combined with competition, has really been the key in keeping the costs down and getting deliveries on schedule.

One major program I would like to emphasize today, because it is a new initiative in acquisition, is the multiyear LHD program. We believe this ship will be the backbone of our Marine amphibious forces for the foreseeable future.

There is no uncertainty within the Navy or Marine Corps that this is our desired ship. Therefore, we think this is an appropriate candidate for a multiyear program.

The program that we put together, in our estimate, is about $800 million less expensive than the series of single ship programs that would be the traditional method of building ships. For this reason, because of our proven experience in the aircraft carrier program involving a multiship approach, we think it merits careful consideration.

Another result is that the three ships will deliver 33 months earlier than if procured in the conventional manner, an important asset in our deterrent posture.

I think these are the two fundamental themes I would like to bring to you: the way we are trying to approach our business, and one of the new programs that is important.

With this, I would like to turn to Admiral Metcalf unless you have some questions.

[The statement of Mr. Pyatt follows:]

PREPARED STATEMENT OF HON. EVERETT PYATT

ASSISTANT SECRETARY OF THE NAVY

(SHIPBUILDING AND LOGISTICS)

Mr. Chairman and distinguished members of the committee. I am Everett Pyatt, Assistant Secretary of the Navy (Shipbuilding and Logistics).

It is my pleasure to appear before this committee to discuss the Navy Shipbuilding and Conversion Program, our accomplishments during the first four years of President Reagan's Naval Recovery Program, and the President's Budget Request for Fiscal Year 1986.

The 600-ship Navy, with the 15 carriers called for by the President's Maritime Strategy, will be in place by the end of this decade. The fleet has increased from 479 battle force ships in 1979 to 545 by the end of this year. This level will be achieved with funds already appropriated. As of 1 February 1985, there were 103 naval ships under construction or conversion at 21 different U.S. shipyards.

At the same time we have increased the size of the Navy, we have reduced our acquisition costs. By improving our acquisition management, we have saved the taxpayers billions of dollars. The FY 1983 and 1984 shipbuilding programs have come in a total of $2.2 billion under the President's Budget Requests. To date in FY 1985, we have saved about $250 million.

The elements of our acquisition strategy are design and cost stability, competition, and improvements in personnel and organization. I want to discuss in more detail three of these elements--design and cost stability, competition, and people.

Design and Cost Stability

We are stressing design stability and specification control enforced through strict attention to unit cost thresholds. By defining our requirements at the outset of our program, we have been able to control changes during production that, in the past, led to high cost growth. We have also allowed more contractor participation in design so that designs represent cost-saving manufacturing techniques, and to identify, at the onset, the risks for all parties to the contract.

The highest cost-risk period in a program is the transition from development to production. This is when design faults show up along with production issues which may not have been adequately addressed during development. We are actively engaged in efforts to better manage this critical transition.

By specifying what we need and resisting the temptation to seek incorporation of the latest improvements during construction, we have been able to move away from cost reimbursement contracts to firm fixed-price and fixed-price incentive contracts. Moving to fixed-price helps control design changes and requires the contractor to know the risks of the project under procurement.

We recognize that some changes must occur, particularly in systems that are several years in production. We must incorporate the latest and most effective personnel protection and safety systems. Chemical warfare protection, for example, is a high priority program. These necessary changes are addressed quickly and fairly through equitable contract clauses and procedures.

We are continuing to strengthen our discipline on design and cost stability. It has worked on conventional shipbuilding programs and will also be effective in helping us execute multiship and multiyear programs such as the FY 1983 aircraft carrier program and the LHD program that we are presenting in the FY 1986 Budget Request.

Competition

Competition has become the cornerstone of our acquisition strategy. It has reduced our acquisition costs and it will continue to reduce costs. We are seeking true competition, not merely its appearance. Navy policy is to establish and sustain second sources in every appropriate program.

In FY 1980, about 15 percent of Navy ship construction and conversion dollars were competitively awarded. In FY 1985, that percentage will increase to almost 85 percent. In FY 1985 and beyond, we intend to compete all of our ship construction and conversion, except the TRIDENT submarine. I previously noted that we had saved some $2.2 billion in the FY 1983 and 1984 programs and have already saved $250 million in the FY 1985 program. Most of those savings can be attributed to competition.

Competition for nuclear attack submarine construction contracts has led to revolutionary breakthroughs in production technology and efficiencies. These improvements are expected to significantly reduce construction times, from 62 months to about 50 months.

You have heard us stress competition before--you will continue to hear us talk about competition. It works. It works to save the taxpayers money. It works to strengthen this nation's shipbuilding industry by providing the shipyards the incentive to improve production facilities and techniques and to incorporate cost-saving technology and methods. It works to provide the Navy with better ships at lower cost.

People

The people who manage our acquisition programs are critical to improving the way we do business. We must have experienced and highly skilled people performing program management and contracting functions. Without competent management, our acquisition strategy and cost-reduction initiatives cannot be implemented to their full potential.

All studies of acquisition management, including a current GAO review of major weapon system acquisition management, agree that proper education, systems acquisition experience, and career incentives are essential to bring high quality people into the acquisition business and keep them there.

This has been a difficult problem. We need our best people in the warfare specialties so that we can maintain the Navy as an effective fighting force. We also need our best people managing the Navy's resources, to ensure that those resources are spent in the most efficient manner and that our weapon systems are of the highest possible quality. This conflict--the competition for the best people--is longstanding.

Last December the Secretary of the Navy and the Chief of Naval Operations approved a new program which establishes a Navy Material Professional. The Material Professional will be prepared to manage the acquisition, maintenance, and readiness functions. The career path of the Material Professional will integrate sea tours with acquisition tours for the entire path. The individual will be selected to be a Material Professional at some point (probably after a command) and the warfare specialty will be relegated to a secondary role. A set of flag officer billets that can only be filled by Material Professionals is being defined.

Establishment of the Material Professional career path will provide the education, experience, and most importantly, the career incentives required to make our acquisition managers capable, skilled business professionals with the warfare background necessary to properly manage weapon systems acquisition.

Establishment of this new career path should not be construed as evidence that our current acquisition managers are not competent. We have had occasion to change program managers for reasons of inadequacy, but our program managers are, for the most part, exceptionally fine managers. Our acquisition successes of the last four years demonstrate that fact. The long-term key is career incentive--there must be opportunities for these deserving individuals to rise to the top.

Other Acquisition Improvement

An area where we are taking new initiatives is that of system specifications. This is a part of our attack on "gold plating." The Secretary of the Navy has appointed a senior civilian to focus his attention on specifications. This individual will oversee our initiative to reduce or cancel specifications for systems that have been overspecified. We will end the practice of designing equipment to meet standards in excess of those of the platform in which it is installed.

Our drive to improve acquisition management has achieved great success. But we will not slow down. We know that our success in achieving a combat-ready 600-ship Navy rests largely on our ability to wisely manage the resources provided us for that purpose. Navy acquisition management will continue to get better.

Shipyard Improvements

I would like to make special note of the steps taken by the private shipyards of the United States to improve their capabilities to respond to the Navy's needs. Without the cooperation and assistance of the private shipyards, we could not have achieved the acquisition improvements I have discussed. In addition, the private yards have taken steps of their own, including capital investment, to improve productivity and reduce costs.

Ships are now constructed of larger, more fully completed modules, resulting in earlier, higher percentage completions. New and improved facilities such as the Todd Pacific Synchrolift dock, the Newport News North Yard and submarine facilities upgrade, Bath Iron Works' improved module capability, and the improved submarine facilities at General Dynamics/Electric Boat, have improved yard efficiency and productivity and have reduced construction times. The private yards have learned from their strongest competitors, the Japanese yards, new and better production and production planning techniques.

All these efforts by the private yards are evidence that the U.S. shipbuilding industry wants to improve its product and reduce the costs. We are most pleased by these developments and look forward to continuing a working relationship that is beneficial to both Navy and the industry.

FY 1986 SCN Program

Now I would like to discuss some highlights of the FY 1986 Shipbuilding and Conversion Program. The FY 1986 Navy Budget includes funding for acquisition of 23 new ships and the conversion of five. The majority of this construction and conversion is for replacement and modernization rather than force expansion. As I noted previously, the 600-ship Navy is on course and on schedule. Our programs for the second term of President Reagan's Administration are designed to consolidate the gains of the past four years and to assure that the 600-ship Navy of the 1990's will contain the most capable and modern ships.

The FY 1986 program includes funds for the thirteenth TRIDENT submarine, four LOS ANGELES (SSN-688) class nuclear attack submarines, three TICONDEROGA (CG-47) class cruisers, two WHIDBEY ISLAND (LSD-41) class landing ship docks, four mine countermeasures ships, four coastal minehunters, two fleet oilers and two TAGOS support ships and for the first of a 3-ship multiyear procurement of WASP (LHD-1) class amphibious assault ships. Funds are also included for conversion of three T-ACS auxiliary crane ships, one acoustic research vessel and one T-AVB aviation support ship. Advance funding is requested for the FY 1987 reactivation of the fourth and last battleship, USS WISCONSIN.

LHD Multiship/Multiyear Program

The funding for the amphibious assault ship begins a multiyear program to procure three of the ships over the FY 1986-1989 period. The lead ship of the class, LHD-1, was authorized in FY 1984.

LHD-1 class ships will eventually replace the old LPH helicopter assault ships with multipurpose platforms of significantly greater capability. The LHD uses much of the same technology as the LHA-1 class, and will offer a well-deck for operation of the Landing Craft Air Cushion (LCAC) vessels as well as a flight deck for helicopters and V/STOL aircraft.

The multiyear acquisition program for the three LHD-1 class ships would utilize one multiyear contract in FY 1986 with Termination Liability funding and full funding for one LHD in each of Fiscal Years 1986, 1988, and 1989. The FY 1986 funding for the multiyear program covers production planning, detail design, advance material procurement, engineering support, and a contingency amount in case of cancellation.

We believe that the multiyear LHD program which we are presenting in the FY 1986 budget is a revolution in ship acquisition strategy. The program will allow us to save $820 million, twenty percent of a conventional annual procurement program spread over the same time period. The ships will deliver a total of 33 months earlier than if procured in the conventional manner, and our amphibious lift requirement will be met earlier. Both Secretary Weinberger and Secretary Lehman are extremely enthusiastic about the program; it is a significant example of how we can do our business better and get the most military capability for the tax dollar. I urge you to look closely at this program; I know you will agree.

Together, the Congress and the Navy have taken significant steps to rebuild the nation's maritime power and ensure that the Navy will be able to meet the challenges of the 1990's and the next century. Private industry has responded in a most positive way to our rebuilding program and to our improvements in acquisition strategy. We need to continue our constructive relationships so that we may continue to design and execute innovative shipbuilding programs that reduce cost and delivery time.

The future of the Navy and the U.S. shipbuilding industry is in our hands. We have achieved a renaissance in naval shipbuilding that has strengthened both. We have more to do--I am confident that, together, we will continue to do it well.

BALANCED SHIPBUILDING REGIME

Admiral METCALF. Good morning. Mr. Chairman.

I am honored to be here to present my view of the warfighting aspects of this program.

As with all Navy programs, we worked long and hard to put together a balanced shipbuilding regime, of which this fiscal year, 1986, is just a part of the continuum to bring us to a 600-ship Navy and 15-carrier battle groups. It is a stable, balanced program. In other words, it fits together, not only this year, but in the out years.

The fiscal year 1986 request for shipbuilding represents 6 percent negative real growth from fiscal year 1985. Your colleagues have recommended a further reduction of more than $600 million which, if sustained, would put the negative real growth in this particular account in this year at about 11 percent.

Once again, we believe that this, in a warfighting sense, is the best mix of ships that we can get for the dollar and we solicit your support to build and maintain a finely balanced 600-ship Navy by and after 1989. We will need the continuing efforts of the committee which has been so supportive in the past.

Thank you, sir.

[The statement of Admiral Metcalf follows:]

PREPARED STATEMENT OF VICE ADM. JOSEPH METCALF, III
DEPUTY CHIEF OF NAVAL OPERATIONS
(SURFACE WARFARE)

Mr. Chairman and distinguished members of the Committee, I am Vice Admiral Joseph Metcalf III, USN, the Deputy Chief of Naval Operations for Surface Warfare and the Sponsor for the Shipbuilding and Conversion, Navy (SCN) Appropriation.

Today I am privileged to have the opportunity to present to you the Navy's SCN budget request for fiscal year 1986 and to discuss our requirements for this year as well as the remainder of the five year shipbuilding plan.

Today, as every day, the United States Navy is on duty around the globe representing our national interests in a multitude of roles. Wherever we are needed, the Navy possesses the balanced forces to provide the precise element of strength to permit the United States and its allies to enjoy free movement over the world's oceans and safe passage through its waterways during what the Chief of Naval Operations has described as "an era of violent peace." This is possible only because the Congress has, over the last four years, joined with the administration to ensure that our Navy has been provided with the ships, the airplanes and most importantly, with the men and women to crew them. This has permitted growth from a total of 479 ships at the end of fiscal year 1980 to 523 battle force ships at the end of FY 1984. We are on course to achieve our 600 ship goal in 1989 and to do so at a much lower cost than could have been predicted. The cost reductions which have been achieved are dramatic.

For example, just in the TRIDENT, SSN-688 and CG-47 lines, our budget request for this year is $962.3 million less than we had projected in the FY 1986 column of last year's five year plan and is also $391.8 million below the amount appropriated last year for a similar ship buy.

Throughout this SCN budget request, cost estimates are lower. This results from increased competition within a shipbuilding industry plagued by lack of commercial work. It is a direct result of a large share of the new construction and conversion work being competed between two or more shipyards, expansion of competition into the area of government furnished equipment and the stable economic climate of the last four years which has been characterized by lower interest rates and the lowest inflation in years.

Overall, the SCN request for FY 1986 represents 10.9 percent of the Navy TOA. This represents a downward trend from previous years and reflects the fact that the vast majority of the 600 ship Navy is either afloat or under contract in builders' yards. We have now moved into a budget period which will maintain and more finely balance the 600 ship mix.

Ship Deliveries

In calendar year 1984, the Navy took delivery of 25 new and converted ships. The new construction programs contributed two ballistic missile submarines, five nuclear attack submarines, one AEGIS cruiser, seven FFG-7 class frigates, three TAGOS-1 class ocean surveillance ships and one cable repair ship, the TARC. From conversion yards came the first four TAKR fast logistic ships, an auxiliary crane ship and the second battleship conversion, USS IOWA. So far in calendar 1985 three ships have delivered; the lead LSD-41, a FFG-7 and a TAGOS. During the remainder of this year 23 more ships are scheduled to deliver as follows: one SSBN, three SSN-688, two CG-47 class AEGIS cruisers, five FFG-7 guided missile frigates, USS FORRESTAL (second CV SLEP to complete), the second LSD-41, three more TAGOS, three ARS-50 class salvage ships, a TACS and three more TAKR conversions. The sustained introduction of these new and converted ships permits the Navy to expand to its 600 ship goal in a controlled and manageable fashion.

Strategic Submarine Forces

As we begin Fiscal Year 1985, our SSBN force is composed of 36 ships. 31 of these are ships of the LAFAYETTE, JAMES MADISON and BENJAMIN FRANKLIN classes. 12 of these ships have been converted to employ the TRIDENT I (C-4) missile with the remaining 19 still carrying the Poseidon missile. In addition, five of the new TRIDENT submarines have been delivered and four of these awesome ships are already conducting deterrent patrols.

The building rate of one TRIDENT submarine per year will be maintained through the FYDP, although the industrial capacity exists to build three every two years without impacting on SSN production. We believe that the present building rate is adequate

to meet our strategic needs. Based on the rate of one per year, the FY 1990 ship will be the seventeenth of the class, of which eight will be configured for the C-4 missile and nine for the larger and more capable D-5 missile. Eventually the eight C-4 ships will be backfitted to employ the D-5 TRIDENT II missile during regularly scheduled overhauls beginning in the early 1990s.

The ultimate size of the TRIDENT Force is a complex amalgam which involves any future arms limitation agreements as well as procurement decisions of other elements of the nuclear triad. Although the final force size of the TRIDENT submarines has not yet been determined, we have tentative plans for a force of about twenty TRIDENTs and we are continuing to study the matter. Our SSBN force is by far the most secure leg of that triad and the growing number of TRIDENT ships at sea on patrol increases our security as each ship begins its deterrent patrols.

Attack Submarine Forces

The force level goal for nuclear attack submarines remains at 100. Given the increasingly formidible Soviet threat, this level of 100 must be considered a fiscally constrained goal. In order to reach and sustain a level of 100 nuclear attack submarines, the President's budget requests 18 SSN-688 class over the five year period. In addition, the lead ship of a new class designated SSN-21 is included in the FY 1989 budget year with required advance procurement funding commencing in FY 1987. This is the first new class of attack submarine to be introduced into the budget since FY 1970 when the first SSN-688 was funded. During this period the Soviet Union has delivered nine new classes of nuclear attack submarines. The SSN-688 is still the finest submarine in the world, but we have upgraded its capabilities to the limits imposed by the 1960s technology which went into its design. The SSN-21 is required to meet the Soviet challenge of the 1990s. We still hold a qualitative edge but the Soviets are improving their product far more rapidly than we anticipated. Since we are numerically smaller, our technologicial advantage must be maintained.

Surface Combatant Forces

Over a third of the 600 ship Navy will be comprised of surface combatant ships. This category includes frigates, destroyers, guided missile destroyers, guided missile cruisers and battleships. The missions assigned to these ships include the entire spectrum of war at sea but primarily entail Anti-Submarine Warfare, Anti-Air Warfare and Strike Warfare.

Our forces at sea are organized and assigned for a particular task and surface combatants are required in every type of mission. In Carrier Battle Groups, Amphibious Groups, Underway Replenishment Groups and in Convoy Escort these ships provide the principal defensive force. The striking power of the TOMAHAWK missile strengthens the offensive role of the surface combatant. This is particularly true of the Surface Action Groups centered on the battleships which are being utilized as a substitute for Carrier Battle Groups in appropriate ocean areas. The introduction of TOMAHAWK and the HARPOON anti-ship missile provides at sea commanders with alternative methods of attack giving them vastly increased flexibility.

Surface combatant force level goals derived in 1980 have remained extremely stable. Our minimum requirement is for four battleships, 33 guided missile cruisers, 67 guided missile destroyers, 37 destroyers and 101 frigates.

Within this minimum force mix our most severe shortfall lies in the guided missile destroyer area. The 29 ARLEIGH BURKE DDG-51 class guided missile destroyers which we are projecting over the next seven years are not force builders but rather one for one replacments for the DDG-2 and DDG-37 classes, which will begin to retire as early as 1989. We intend to retain the CG-16 and CG-26 class cruisers up to 35 years of service life and provide them with the New Threat Upgrade of AAW sensors and weapons, but this is only a stopgap measure. Long term resolution of this issue is intertwined with aircraft carrier construction in the 1990s, for if we maintain our deployable carrier force level at 15 through the first quarter of the 21st century, additional guided missile destroyers will be required.

Amphibious Warfare

After ten years through the 1970s when no amphibious ships were constructed, the present administration has committed to ensure that the superb warfighting capability of the U.S. Marine Corps is fully supported with the modern ships and assault craft required to take full advantage of this unique capability to project power ashore wherever our national interest dictate. In FY 1981 the first Landing Ship Dock LSD-41 class was appropriated and in FY 1984 the first LHD-1 was appropriated. This year the seventh and eighth LSD-41 are included in the President's budget and funding for a three ship multi year LHD-1 program is also initiated this year. This building program supports the Department of the Navy goal of sufficient ships by 1994 to conduct the simultaneous lift of the Assault Echeleons of a Marine Amphibious Force (MAF) and Marine Amphibious Brigade (MAB).

Both the LHD and LSD have been designed to enhance the operational capability of the Landing Craft Air Cushion (LCAC). The LSD-41 will carry four LCAC and the LHD will carry three.

Future amphibious assaults will be conducted capitalizing on the 20-knot speed of the amphibious task force, heavy lift/long range helicopters and the 40-50 knot speed of the LCAC.

Logistic Support Forces

The concept of operations for logistic support consists of multi product "station ships" of the AOE or AOR classes assigned as an integral part of each carrier battle group. The oilers (AO/TAO), ammunition ships (AE/TAE) and stores ships (AFS/TAFS) operate in escorted Underway Replenishment Groups shuttling fuel, ammunition and stores from either advanced logistic bases within the theater of operations or consolidation points at sea. These shuttle ships are resupplied from merchant tanker and cargo ship deliveries from CONUS or other stocking points. In the event of loss or other non-availablity of a station ship, one AO/TAO and one AE may be assigned to the battle group.

Our present force level of station ships is 11 (four AOE, seven AOR) against a requirement of 15 by 1990. The FYDP contains the four AOEs we require to make up this shortfall. The FYDP also includes three ammunition ships and the jumboization of the five AO-177 class oilers from 120K barrel capacity to 180K barrels to match the capacity of the TAO-187 class.

This year we continue the TAO procurement line with a request for two ships. Seven of this class have been appropriated and the first will deliver in September of 1986. These ships are urgently required to increase oiler force levels and to eventually replace the World War II era ships which are still in service.

Mine Countermeasure Force

Over the past four years the shipbuilding program has begun to address the critical requirement for new mine countermeasures ships. The threat of mine warfare is severe both for U.S. Naval and commercial ports in CONUS and in projected overseas operating areas. Two types of ships are under construction. The larger of the two, the MCM-1 class, is deployable world wide in support of in theater operations. The MSH-1 class is a smaller ship designed for clearance of U.S. military and commercial harbors.

Present plans call for construction of fourteen MCM-1 and seventeen MSH-1 ships. This constitutes a bare bones minimum force and will require sequential clearance of U.S. ports and approaches. It also places a heavy reliance on our allies to clear their own waters.

FY 1986 Shipbuilding Request (VG-1)

In FY 1986 the President's budget requests funding for 23 new construction ships and five conversions. These 28 ships represent those forces required to continue the rebuilding program initiated four years ago to ensure that the U.S. Navy has adequate battle forces and supporting forces to be able to respond to our National requirements as they arise. This request reflects negative real growth from the FY 1985 appropriation and is priced to reflect the quantum improvements in acquisition costs which our competitive bid process has engendered.

(VG-2) The plan reflects a stable commitment to shipbuilding and contains very little change from the FY 1986 line of last year's five year plan. The primary change has been in the area of Mobile Logistic ships, where the AOE and AE acquisitions have been delayed while we examine the most cost effective way to support our battle forces.

The ships requested this year fully support the balanced 600 ship Navy which we will achieve in 1989.

A description of each program follows. An illustration accompanying each program description appears at the conclusion of the statement.

TRIDENT - SSBN (VG-3)

At this time, four TRIDENT submarines have commenced deterrent patrols and a fifth ship has been delivered and will commence her first patrol this year. The last four TRIDENTs have been delivered an average of six weeks ahead of schedule. The next three ships will deliver at eight month intervals and we expect early deliveries to continue for these ships. The addition of these ships maintains the high survivability of our SSBN Force and greatly increases the payload and capability of the U.S strategic deterrent force. The first eight of the class will be delivered with the TRIDENT I C-4 missile. The changeover to the TRIDENT II D-5 missile occurs with the ninth ship which was funded in FY 1981.

For construction of the thirteenth TRIDENT submarine in FY 1986, we are requesting a total of $1531.8 million which includes $245.2 million in advance procurement for the fourteenth and fifteenth ships.

Nuclear Attack Surmarine - SSN-688 Class (VG-4)

The FY 1986 shipbuilding budget requests authorization and appropriation for four of this highly successful class of nuclear attack submarine. The four SSN-688s funded in FY 1985 represented the highest number for any year since FY 1974 and reflects a clear understanding on the part of the Congress of the important warfighting capability these ships possess. Of the 48 units of this class approved to date, all are under contract and 30 have been delivered with three more scheduled to deliver during the remainder of calendar year 1985.

These ships include the Vertical Launch System (VLS) for TOMAHAWK as well as enhanced arctic capability, improved quieting and improved SUBACS systems.

The five year plan reflects the introduction of the SSN-21 class in FY 1989. As the SSN-21 class building program ramps up in the early 1990s, the SSN-688 program will be completed.

This year the budget requests $2708.4 million for four SSN-688 class ships. This includes $585.2 million in advance procuement for the FY 1987 and FY 1988 submarines.

Battleship Reactivation (VG-5)

In FY 1986 the President's budget includes $53.5 million in long lead funding for the USS WISCONSIN (BB 64). This will be the fourth and last of the battleship reactivations requested by the Department.

The contributions of USS NEW JERSEY AND USS IOWA off Central America and Beirut have validated the Secretary's decision to bring these powerful ships back on line. The Congress has been fully supportive and accelerated reactivation of MISSOURI from FY 1985 to FY 1984 utilizing prior year SCN contract savings. The addition of TOMAHAWK and HARPOON missiles to the awesome firepower of the nine 16" guns coupled with the size and survivability of these ships make them a highly cost effective addition to the Fleet. At this time, it is anticipated that the WISCONSIN will be reactivated at a private yard on the Altantic or Gulf Coast. When she is recommissioned in early 1989, WISCONSIN and her three sisters will provide the Navy with unparalled firepower, both in the open ocean and in the support of amphibious operations ashore. Battleship Surface Action Groups (SAGs) will be utilized in the future to substitute for Carrier Battle Groups in areas where their massive firepower will assist the accomplishment of our national role.

Aircraft Carrier Service Life Extension Program - CV SLEP (VG-6)

In May of 1985 USS FORRESTAL will complete the Carrier Service Life Extension program and resume her duties with the U.S. Altantic Fleet. As we wind down toward completion of FORRESTAL SLEP it is apparent that the lessons learned from SARATOGA have been well applied and that FORRESTAL will return to the Fleet with renewed capability and performance. The first SLEP carrier USS SARATOGA, completed her post SLEP deployment with flying colors and is currently operating out of Norfolk. In April of 1985, USS INDEPENDENCE will enter the Philadelphia Naval Shipyard as the third SLEP ship. She will be there for 28 months and is funded in the same manner as SARATOGA and FORRESTAL. Detailed planning for her SLEP has been in progress for over three years and takes full advantage of lessons learned in both prior ships. The next two carriers to undergo the SLEP program are USS KITTY HAWK and USS CONSTELLATION. Funding for these two ships comprises the CV SLEP funding line across the FYDP. The level of funding for these two Service Life Extensions has been reduced to approximately 64 percent of that provided for the first three ships. This is a reflection of the present material condition of those two carriers and the fact that many of the jobs normally done during the SLEP process have already been accomplished during routine maintenance periods. Due to work effort involving main engines and flight deck repairs and improvements, the SLEP duration of 28 months will be maintained. Some repairs and service life enhancement features will be accomplished during later overhauls on these ship in lieu of SLEP. For FY 1986, the President's budget requests $133.4 million in advance procurement for the SLEP of USS KITTY HAWK which will begin in FY 1987.

Guided Missile Cruiser - TICONDEROGA CG-47 Class (VG-7)

The AEGIS Combat System installed in the CG-47 class cruiser includes the most sophisticated anti-air warfare system in the world. It is designed to counter the full spectrum of anti-ship missile threats. During her 1983/1984 deployment to the Mediterranean the ship proved its worth. Because of the complete air picture generated by the AEGIS system, launch of alert Combat Air Patrol was reduced significantly resulting in a large fuel savings over previous deployments. The confidence which the battle group commander had in the system permitted him to concentrate on higher level operational problems rather than devoting all his time to the air picture. Upon return from the Mediterranean, the TICONDEROGA successfully executed a difficult series of missile firing tests under very realistic conditions. Her success has answered all of the critical questions as to the ability of this ship to defend a task force against a high level of threat. It is a superb warship, without equal on the seas today.

During the past year the USS YORKTOWN, the second ship of the class was subjected to rigorous shock tests. The results were excellent and caused only minor and temporary casualties despite the severity of the shock. The Navy Department is continuing to enforce a rigid shock test program which includes all new construction classes.

The three ships approved in FY 1985 bring to 16 the total approved to date. Of this number 12 have been awarded to Ingalls Shipbuilding and four to Bath Iron Works. The introduction of competition has helped reduce the cost of these superb warships and we are now expanding the competitive base to include the AEGIS combat system and associated equipments. Four major upgrades have been incorporated into the CG-47 class, VLS (Vertical Launch System) in CG-52, SQQ-89 ASW system in CG-56, SPY-1B radar in CG-59 as well as computer and CPS upgrades in CG-62. Each provides major capability improvements.

In addition to her AAW capability, the TICONDEROGA class possesses superior capability in ASW and Anti-Ship Warfare. With the advent of TOMAHAWK and VLS, the strike warfare potential of this versatile class will increase even more. This year the budget request is for $2766.2 million for three ships of which $14.6 million is for advance procurement associated with multi-year procurment of the 5" MK-45 gun system.

Arleigh Burke Class Guided Missile Destroyer - DDG-51 (VG-8)

The lead ship of this class was appropriated in FY 1985. It is urgently required in the Fleet to replace the DDG-2 and DDG-37 class ships which will begin their retirement in 1989. The ARLEIGH BURKE is designed to be affordable in quantity while providing superior warfighting capability to the Fleet. Last year the Congress reduced the Defense Department's request for the lead ship by $123.4 million. Earlier this month, the Secretary of the Navy announced the award of the lead DDG-51 to Bath Iron Works. This year, we are requesting $164.3 million in advance procurement for the follow ships to be funded in FY 1987.

In order to keep the price of these ships as low as possible, further competition will be introduced in FY 1987 with a second shipyard brought on line and a third builder in FY 1988 when we ramp up to a sustained production rate of five per year. We are closely adhering to Congressional guidance in the second source acquisition of Government Furnished Equipment for the class.

Landing Ship Dock - LSD-41 Class (VG-9)

To date the Congress has authorized and appropriated six LSD-41 class ships. The first ship of the class, USS WHIDBEY ISLAND (LSD-41), was commissioned on 9 February 1985 and has begun its shakedown/workup period. These ships were designed to transport four Landing Craft Air Cushion (LCAC) each and will add tremendous flexibility to the amphibious assault mission when they enter service. This class of ships collectively permits large numbers of loaded LCAC to be launched in a short period of time to attack hostile shores at high speed from over the horizon.

The two LSD-41s requested in FY 1986 are the seventh and eighth of the class. This meets the force objective for the LSD-41. The five year shipbuilding plan displays the start of construction in FY 1988 for a cargo carrying variant of the LSD-41 which will be required to meet the Marine Corps lift objectives by 1994.

This year we are requesting $414.4 million in full funding for two ships. $83.5 million was appropriated in FY 1985 as long lead funding for these ships. The Navy holds fixed price options from Avondale Ship Industries for the construction of these ships.

Amphibious Assault Ship - LHD-1 (VG-10)

The LHD-1 class is a multi-purpose amphibious assault ship that is designed to be the linch-pin of our over-the-horizon amphibious force of the 1990s and beyond. The most capable and versatile amphibious ship ever built, the LHD does more than any other amphibious program to close the gap between current amphibious and actual requirements. As a replacement for our aging LPH class Helicopter Assault Ships, the LHD will significantly increase total lift capability, provide a flight deck for helicopters and VSTOL aircraft and a large well deck for both air cushion and conventional landing craft. The LHD is a modification of the LHA class. The first was funded in the FY 1984 budget and is under construction at Ingalls Shipbuilding. The ship will deliver in March 1989. The FY 1985 budget authorized and appropriated $39.2 million in advance procurement for the FY 1986 ship. This year the budget request is for $1507.2 million which includes $329.3 million for long lead equipment and minor fabrication of the LHD-3 and LHD-4. The procurement strategy envisions a contract for three ships being awarded to the winner of a competitive bid process. The LHD-2 would be fully funded with equipment procurement and minor fabrication on the LHD-3 and LHD-4 begun on a termination liability funding basis. Those ships would be fully funded in FY 1988 and FY 1989 respectively. The savings from this multi-year proposal are about $820 million and the ships will deliver to the Navy at least 33 months earlier than if procured on an annual basis.

Mine Countermeasures Ship - MCM-1 (VG-11)

The MCM-1 AVENGER, funded in the FY 1982 budget was the first mine countermeasures ship to be built for the U.S. Navy since the mid 1950s. Only three of the obsolete MSO class are still in the active Fleet and 18 others remain on duty with the Naval Reserve Force. The Soviet Union has a large number of sophisticated mines in their inventory which require modern detection and clearance techniques which the older MSOs do not posess. This new ship has a wooden hull and non-magnetic machinery to minimize danger from magnetic mines and contains state-of-the-art navigation. mine hunting and mine neutralization hardware. To date nine of the 14 MCM-1 class ships required by the Navy have been approved by the Congress and the ships are in series production at Peterson Shipbuilders and Marinette Marine. This year the budget request is for $334.1 million for the tenth through thirteenth ships of the class.

Mine Sweeper Hunter - MSH-1 Class (VG-12)

To complement the MCM the Navy requires a class of small but sophisticated mine countermeasures ships which are capable of clearing U.S. ports in time of crisis. After an intense period of competition, the lead ship of the CARDINAL class was awarded in November of 1984 to Bell Aerospace/Textron of New Orleans, LA. The contract includes not only the lead ship but fixed price options for up to four MSHs in FY-86 and four in FY-87.

The MSH will be built as a surface effect ship using glass reinforced plastic as the hull construction material. In order to minimize R&D requirements, the MSH will utilize much of the same mission equipment as the MCM class. These ships will be operated by the Naval Reserve Force and will replace the obsolete MSO class ships currently in the NRF. No element of our Navy is as deficient in capability against the threat as is the Mine Countermeasures Force. We must proceed to build up our MCM/MSH Force level as rapidly as possible. This year we are requesting $184.5 million for the first four follow ships of the MSH-1 class.

Fleet Oiler - TAO-187 Class (VG 13)

FY 1986 represents the fifth year of funding for the TAO-187 class.

This class of oiler is an austere fleet ship built to commercial standards except in mission critical areas where military specification have been utilized. It will be manned by civil service (MSC) mariners augmented by a small Navy communications detachment. Navy studies indicate a requirement for at least 20 ships of this class and more than that if the AO-177 class is not jumboized. During the period FY 1982-1985 seven TAOs have been appropriated. The first four are under construction at Avondale. These ships are all on schedule and within budget. The FY-85 contract will include fixed price options for TAO construction in FY 1986 and FY 1987. For FY 1986, we are requesting $328.5 million for two ships.

Ocean Surveillance Ship - TAGOS (VG-14)

At the present time 12 ships of this class are under contract to Tacoma Boatbuilding. The fourth of the class was just delivered to the Navy on 15 February and the first ship is now on station in the Altantic and the second in the Pacific. Test results from the ship and its towed array have been excellent. The fiscal difficulties experienced by the lead builder over the past year have abated and deliveries are proceeding in a timely fashion. The Navy has recently awarded a competitive contract for the construction of the two TAGOS authorized and appropriated in FY 1985. These ships will be as identical as possible to the first 12. The FY 1985 contract will include fixed price options for four more TAGOS during the period FY 1986-1987. The total requirement for TAGOS ships is 26 with 14 appropriated. This year the President's budget request $115.1 million for two TAGOS. This amount includes $1.2 million in advance procurement for the engines for the FY 1987 ships. This funding is required since the engine manufacturer has advised the Navy of his intention to shut down the engine production line prior to the time that FY 1987 funds would be available.

Acoustic Research Ship - AG (VG-15)

The FY 1986 budget requests $68.9 million to fund the conversion of the former USNS HAYES (TAGOR-16), to an acoustic research ship. In this mission, she will replace an existing craft which is over 40 years old and no longer capable of providing required services in support of the Submarine Noise Reduction Program. HAYES will provide a quiet platform for submarine acoustic measurement to ensure that our first line submarine forces retain the technological advantage which is so critical to our at sea operations.

Auxiliary Crane Ship - TACS (VG-16)

Fiscal year 1985 marked the transition of funding for the TACS program from other appropriations to the SCN account. Prior to FY 1985 two ships had been funded in other appropriations with the third of the class funded at a level of $36.0 million in SCN in FY 1985 for one ship. For FY 1986, the President's budget requests $82.5 million for three TACS conversions. The purpose of these ships is to offload containers and other outsized cargo from non-self sustaining cargo ships; either offshore or in undeveloped or damaged ports. A total of ten TACS have been funded or are included in the five year plan. Final class size is under review and may increase as the size of the Ready Reserve Force is enlarged to accommodate the declining U.S. Merchant Marine. Offloading tests conducted with the lead ship have been highly successful. A mix of C5 and C6 merchant hulls are utilized for this program and in addition to offloading other ships, their own cargo capability will be utilized.

Aviation Logistics Support Ship - TAVB (VG-17)

This program converts two government owned Seabridge class ships of the Ready Reserve Force (RRF) to the capability to load the vans and equipment of a Marine Aviation Intermediate Maintenance Activity and transport them to the desired in-theater location. These ships have a combination Roll On/Roll Off

(RO/RO) and self sustaining container ship configuration which will permit them to self offload alongside a pier or from offshore. After the Aviation IMA is offloaded the TAVB can revert to a standard sealift role if required. Due to a reduction of $11.0 million imposed by the appropriation bill on the FY 1985 request, funding for the FY 1985 ship is extremely tight and the possibility of a cost overrun exists if mandatory repairs exceed the minimum amount of funds reserved for growth and changes. Conversely, the FY 1986 program is considered properly funded with a request of $26.9 million in the FY 1986 budget. In addition, $5.2 million in advance procurement from FY 1985 is available for the second ship.

CRAFT (VG-18)

The FY 1986 request for craft includes $79.5 million for a variety of service craft and $34.4 million in the landing craft line for three Special Warfare Craft (Medium). In the service craft line we are requesting the lead ship of a new class of Torpedo Range Tenders (YFRT). This craft will fire torpedoes for proofing shots and conduct some RDT&E firings. They are able to recover sunken weapons and provide target support, range maintenance and other functions. They are of increasing importance to us now as the development of our new MK-50 Advance light weight torpedo and MK-48 ADCAP intensifies. The six Yard Patrol Craft (YP) requested this year complete the replacement program for training at the U.S. Naval Academy and NETC Newport. YPs which are being replaced will be utilized in the Craft of Opportunity Program (COOP) and for officer training at the Surface Warfare Officers school in Coronado, California and also to train submarine officers in ship handling skills. Two YDs or floating cranes are in the program for $13.2 million as part of a program to replace World War II cranes. The YCs and YFNs are also part of any ongoing inventory replacement program.

Landing Craft Air Cushion - LCAC (VG-19)

The LCAC provides a revolutionary capability to Amphibious Warfare. It will give the Navy-Marine Corps team a capability to launch amphibious assaults from over-the-horizon, thereby decreasing risk to our ships and increasing our ability to surprise the enemy defender. The mere presence of an air cushion capability in the Amphibious Task force greatly complicates the enemy's efforts to mass an adequate force to repel the assault by increasing the number of potential landing sites he must defend.

FY-86 will be the fifth year of LCAC production with 21 craft having been appropriated to date. The first craft was delivered to the Navy in December 1984, and will be included in the first six to be made operational on the west coast by the summer of 1986. These craft can be carried in varying numbers in LSDs, LHAs, LPDs and LHDs, and we have tailored our force levels and ship configurations to accommodate the 90 LCAC needed to support a MAF and a MAB.

This year Navy is requesting $307.5 million for twelve LCACs which includes $30.8 million in advance procurement for future production. Production requirements will be split between a lead yard and a second source. A total of 60 LCACs are contained in the five year plan submitted with the FY-86 budget.

Moored Training Ship Demonstration - MTSD (VG-20)

The construction of a shore based nuclear plant is an expensive and time consuming process. Over the next few years, several of the nuclear facilities utilized to train personnel for service on nuclear powered submarines and surface ships will reach the end of their normal service lives. In FY 1985 the Congress appropriated $30.0 million in advance procurement funding leading to the conversion of a nuclear submarine to pier side training duty. Utilization of a ship in this role will save hundreds of millions of dollars in construction costs and permit economic, state-of-the-art training with minimum capital expenditures. The request for FY 1986 is for $26.5 million in long lead funding. A full funding request for FY 1987 is not included in the FYDP pending identification of the precise hull to be utilized and completion of final cost requirements based on that individual ship.

Outfitting/Post Delivery

This year the request for outfitting is $228.5 million. This funds Government Funded repair parts and other material, including stock fund items and general use consummables required to fill a ship initial allowance for storeroom and operating space items. The Post Delivery line funds all work, including related design, planning and procurement of government furnished material (GFM) required for correction of defects or deficiencies identified during trials or the post delivery period. In FY 1986 the Post Delivery requirement is for $112.6 million. Both of these lines are a function of the number and mix of ship types which will deliver during the fiscal year.

Strategic Sealift - RRF

Over a period of many years the size of the U.S. Merchant Marine has decrease d to the point that its ability to support Defense requirements in times of crisis has become doubtful. In FY 1984, the Department requested funds to purchase ships from industry which were no longer commercially viable in order to build up the Ready Reserve Force to ensure adequate sealift. As the U.S. Merchant Marine continues to shrink, the planned goal for the RRF has grown accordingly from 77 ships in 1984 (61 day cargo ships and 16 tankers) to 116 ships at present (100 dry cargo, 16 tankers). As of 1 January 1985 the RRF consisted of 64 ships (one Auxiliary Crane Ship, eight tankers, 55 dry cargo ships). In FY-86 we would like to purchase at least 10 RO/RO ships, two LASH ships and two container ships. The exact number of ships purchased will depend on the number offered to the government and the asking price.

Mr. Chairman, that concludes my presentation. I appreciate this opportunity to present the Navy's shipbuilding request for fiscal year 1986. I hope this material will be of assistance to you as you begin you deliberations on the DoD Authorization Bill. For many years this Committee has given the Navy Shipbuilding program your full and unstinting support and I respectfully solicit a continuation of that understanding.

VG #1

SHIPBUILDING AND CONVERSION, NAVY
FY 1986 BUDGET REQUEST
($ IN MILLIONS)

PROGRAM	NUMBER	TOA REQUESTED
TRIDENT SUBMARINE	1	1,286.6
TRIDENT A.P.	-	245.2
ATTACK SUBMARINE (SSN-688 CLASS)	4	2,123.2
ATTACK SUBMARINE A.P.	-	585.2
BATTLESHIP REACTIVATION A.P.	-	53.5
CARRIER SLEP A.P.	-	133.4
GUIDED MISSILE CRUISER (CG-47 CLASS)	3	2,751.6
GUIDED MISSILE CRUISER A.P.	-	14.6
GUIDED MISSILE DESTROYER A.P. (DDG-51 CLASS)	-	164.3
LANDING SHIP DOCK (LSD-41 CLASS)	2	414.4
AMPHIBIOUS ASSAULT SHIP (LHD-1 CLASS)	1	1,177.9
AMPHIBIOUS ASSAULT SHIP A.P.	-	329.3
MINE COUNTERMEASURES SHIP (MCM-1 CLASS)	4	334.1
MINESWEEPER HUNTER (MSH-1 CLASS)	4	184.5
FLEET OILER (TAO-187 CLASS)	2	328.5
OCEAN SURVEILLANCE SHIP (TAGOS-1 CLASS)	2	113.9
OCEAN SURVEILLANCE SHIP A.P.	-	1.2
ACOUSTIC RESEARCH SHIP (AG)	1*	68.9
AUXILIARY CRANE SHIP (TACS)	3*	82.5
AVIATION LOGISTICS SUPPORT SHIP (TAVB)	1*	26.9
MOORED TRAINING SHIP DEMONSTRATION (MTSD)	-	26.5
SERVICE CRAFT	-	79.5
LANDING CRAFT	-	34.4
STRATEGIC SEALIFT	-	203.4
LANDING CRAFT AIR CUSHION (LCAC)	12	276.2
LANDING CRAFT AIR CUSHION A.P.	-	30.8
OUTFITTING	-	228.5
POST DELIVERY	-	112.6
TOTAL 23 NEW CONSTRUCTION 5* CONVERSIONS	28	$11,411.6M

VG #2

NAVY FIVE YEAR SCN PLAN
FISCAL YEAR 1986-1990
CONGRESSIONAL SUBMISSION

	FY-86	FY-87	FY-88	FY-89	FY-90
TRIDENT	1/1531.8	1/1673.6	1/1751.8	1/1835.8	1/1923.0
SSN-688	4/2708.4	4/2543.5	4/2872.9	2/1677.0	4/2812.3
NEW SSN	-	456.1	132.5	1/1693.3	538.1
BB(R)	53.5	1/422.4	-	-	-
CV SLEP	133.4	1/491.8	111.2	115.8	1/651.6
CG-47	3/2766.2	3/2885.2	3/3139.0	2/2229.1	-
DDG-51	164.3	2/2239.5	5/4523.4	5/4512.3	5/4690.0
LSD-41	2/414.4	-	-	-	-
LHD-1	1/1507.2	379.2	1/915.5	1/701.4	1/1505.5
LPD-4 SLEP	-	80.5	1/279.3	3/457.3	3/360.8
LSD-41 (VAR)	-	23.6	2/512.5	2/544.4	2/536.5
MCM	4/334.1	1/102.2	-	-	-
MSH	4/184.5	4/195.7	4/219.0	4/212.1	-
PCM	-	-	-	(6)95.1	(6)95.1
TAO	2/328.5	2/356.4	2/385.8	2/391.7	2/403.7
AO(JUMBO)	-	-	1/70.3	2/145.6	2/135.6
TAGOS	2/115.1	2/117.3	-	-	-
AE	-	-	1/485.1	1/373.6	1/380.0
AFDM	-	-	1/126.2	-	1/103.0
AOE-6	-	1/756.6	1/572.5	1/593.7	1/608.3
AG(C)	1/68.9	-	-	-	-
AR	-	-	-	-	1/524.7
TACS(C)	3/82.5	2/66.6	2/70.2	-	-
TAVB(C)	1/26.9	-	-	-	-
MTS(C)	26.5	-	-	-	-
SERVICE CRAFT	79.5	84.0	87.3	69.5	140.3
LANDING CRAFT	34.4	62.4	64.5	33.6	47.2
STRAT SEALIFT	203.4	29.1	70.2	27.8	74.0
LCAC	(12)/307.0	(12)/310.3	(12)/315.4	(12)/327.6	(12)/340.8
OUTFITTING	228.5	254.1	250.9	260.3	303.2
POST DELIVERY	112.6	204.3	146.7	209.8	150.1
TOTAL	11,411.6	13,734.4	17,102.2	16,526.8	16,323.8
SHIP COUNT	23/5	20/4	25/4	22/5	19/6

VG #3

TRIDENT SUBMARINE - SSBN

Mission:

To provide an undersea strategic missile system to ensure that the United States continues to maintain a credible, survivable deterrent, independent of forseeable threats.

CHARACTERISTICS

LENGTH: 560 FT
NAV DRAFT: 36 FT
PROPULSION: Nuclear
WEAPONS: 24 SLBM Missiles, Torpedoes

CREW:

OFFICER	ENLISTED
15	145

BEAM: 42 FT
DISPLACEMENT (SUBMERGED): 18, 700 Tons
SPEED: 20+ KTS

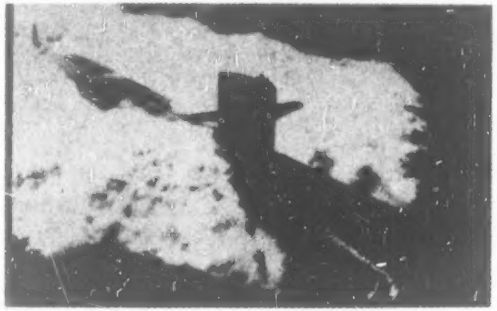
FUNDING REQUEST	NUMBER	TOA * REQUESTED	BUILDER
FY 1986 PROGRAM:	1 SHIP	$1531.8 MILLION * INCLUDES ADVANCE PROCUREMENT	ELECTRIC BOAT

VG #4

NUCLEAR ATTACK SUBMARINE - SSN 688

Mission:

To destroy enemy ships, primarily submarines, in order to prohibit the employment of such forces in attack and destruction of U.S. and Allied targets.



CHARACTERISTICS

LENGTH: 360 FT
NAV DRAFT: 32 FT
PROPULSION: Nuclear
WEAPONS: Torpedoes, HARPOON, TOMAHAWK

	OFFICER	ENLISTED
CREW:	12	90

BEAM: 33 FT
DISPLACEMENT: 6,900 Tons
SPEED: 20 + KTS

FUNDING REQUEST	NUMBER	TOA * REQUESTED	BUILDERS
FY 1986 PROGRAM	4 SHIPS	$2708.4 MILLION *INCLUDES ADVANCE PROCUREMENT	NEWPORT NEWS ELECTRIC BOAT

VG #5

BATTLESHIP REACTIVATION - BB(R)

Mission:

To conduct prompt and sustained combat operations at sea, worldwide, in support of national interests.

CHARACTERISTICS

LENGTH: 887 FT
NAV DRAFT: 38 FT
PROPULSION: STEAM

	OFFICER	ENLISTED
CREW:	66	1471

BEAM: 108 FT
DISPLACEMENT: 58,000 TONS
SPEED: 30 + KTS

WEAPONS: 9 16 Inch guns, 12 5 inch guns, 32 TOMAHAWK, 16 HARPOON, 4 Close in Weapons Systems (CIWS)

FUNDING REQUEST	NUMBER	TOA * REQUESTED	INDUSTRIAL SITE
FY 1986 PROGRAM:	–	$53.5 MILLION ADVANCE PROCUREMENT*	GULF/EAST COAST PRIVATE SECTOR

CARRIER SERVICE LIFE EXTENSION PROGRAM-CV SLEP

VG #6

Mission:

To operate aircraft and engage in attacks on targets afloat and ashore.

CHARACTERISTICS (USS INDEPENDENCE)

LENGTH:	1,070 FT
NAV DRAFT:	37 FT
CATAPULTS:	4
AIRCRAFT:	1 Carrier Air Wing. 86 POST SLEP

	OFFICER	ENLISTED
CREW	143	2690
BEAM:	129.5 FT	
DISPLACEMENT:	79,300 Tons	
SPEED:	30 + KTS	

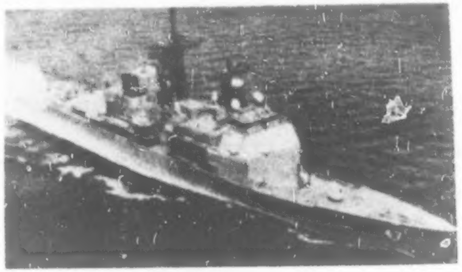
FUNDING REQUEST	NUMBER	TOA * REQUESTED	INDUSTRIAL SITE
FY 1986 PROGRAM:	—	$133.4 MILLION * ADVANCE PROCUREMENT	PHILADELPHIA NAVAL SHIPYARD

VG #7

GUIDED MISSILE CRUISER - CG-47

Mission:

To destroy enemy aircraft, missiles, submarines and surface ships in order to prohibit the employment of such forces against U.S. forces. CG-47 class ships will normally be assigned to carrier battle groups or surface action groups.



CHARACTERISTICS

LENGTH: 563 FT
NAV DRAFT: 31 FT
PROPULSION: Gas Turbine

	OFFICER	ENLISTED
CREW:	33	362

BEAM: 55 FT
DISPLACEMENT: 9,600 Tons
SPEED: 30 + KTS

WEAPONS: AEGIS Combat System, Vertical Launch System SM-2 MR, 2 5"/54 Guns, TOMAHAWK, HARPOON, TORPEDOES, Close in Weapons System (CIWS), LAMPS MK III Helicopter, AN/SLQ32 (V3), SRBOC

FUNDING REQUEST	NUMBER	TOA * REQUESTED	BUILDER
FY 1986 PROGRAM:	3 SHIPS	$2766.2 MILLION * INCLUDES ADVANCE PROCUREMENT	INGALLS BATH IRON WORKS

VG #8 GUIDED MISSILE DESTROYER - DDG 51

Mission:

To destroy enemy aircraft, missiles, submarines and surface ships. The DDG 51 will be employed as a part of a Carrier Battle Group, Surface Action Group, Underway Replenishment Group or Amphibious Group.

CHARACTERISTICS

LENGTH: 466 FT
NAV DRAFT: 30 FT
PROPULSION: LM 2500 Gas Turbine

	OFFICER	ENLISTED
MANNING:	23	280

BEAM: 59FT
DISPLACEMENT: < 8300TONS
SPEED: 30 KTS

WEAPONS: AEGIS Weapon System, Vertical Launch System, TOMAHAWK, SM-2 MR, VLA, SEAFIRE/GUIDED PROJECTILE, HARPOON, Torpedoes, (1) 5"/54 gun, SQS/53C SONAR, AN/SQR 19 TACTAS, CIWS (2), SLQ 32 (V) 2/SUPER RBOC, LAMPS MKIII ELECTRONICS

FUNDING REQUEST	NUMBER	TOA * REQUESTED	BUILDER
FY 1986 PROGRAM:	—	$164.3 MILLION ADVANCE PROCUREMENT	TBD

VG #9

LANDING SHIP DOCK - LSD-41

Mission:

To transport and launch loaded amphibious craft and vehicles with their crews and embarked personnel in amphibious assault operations.

CHARACTERISTICS

LENGTH: 609 FT
NAV DRAFT: 19.5 FT
PROPULSION: DIESEL
SPEED: 20+ KTS

	OFFICER	ENLISTED
CREW	18	337

BEAM: 84 FT
TROOP LIFT: 504 *
LCAC: 4
FULL LOAD DISPLACEMENT: 15,745 Tons

* 338 Troops plus 102 surge capacity; 64 assault craft unit accommodations.

FUNDING REQUEST	NUMBER	TOA * REQUESTED	BUILDER
FY 1986 PROGRAM:	2 SHIPS	$414.4 MILLION	AVONDALE (OPTION ON FY 84 CONTRACT)

VG #10

AMPHIBIOUS ASSAULT SHIP - LHD 1

Mission:

To embark, deploy and land elements of a major Marine landing force in an assault by helicopters, VSTOL aircraft, landing craft and amphibious vehicles. The LHD class may be converted to operate AV-8s in the attack role

CHARACTERISTICS

LENGTH:	844 FT
NAV DRAFT:	26 FT 8 IN
PROPULSION:	STEAM
TROOP CAPACITY:	1,873
HELICOPTER CAPACITY	42 CH-46 equivalents

	OFFICER	ENLISTED
CREW: INCLUDES CATF AND STAFF	98	982
BEAM:	106 FT	
FULL LOAD DISPLACEMENT:	40,600 Tons	
SPEED:	20 + KTS	
LCAC:	3	

FUNDING REQUEST	NUMBER	TOA * REQUESTED	BUILDER
FY 1986 PROGRAM:	1 SHIP	$1507.2 MILLION *INCLUDES MULTI-YEAR FUNDS FOR LHD 3, 4	COMPETITIVE

VG #11

MINE COUNTERMEASURES SHIP - MCM 1

Mission:

To hunt, neutralize and sweep mines in CONUS waters, choke points and overseas areas.

CHARACTERISTICS

LENGTH: 224 FT
NAV DRAFT: 11.4 FT
PROPULSION: DIESEL

	OFFICER	ENLISTED
CREW:	5	67

BEAM: 39 FT
SPEED: 13.5 KTS
HULL: Wood/GRP

EQUIPMENT: Mine Hunting Sonar SQQ-30, Mine Neutralization System (MNS), Precise Integrated Navigation System (PINS AN/SSN-2)
Standard mechanical sweep gear

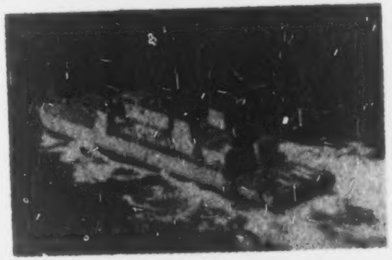
FUNDING REQUEST	NUMBER	TOA * REQUESTED	BUILDERS
FY 1986 PROGRAM:	4 SHIPS	$334.1 MILLION	PETERSON MARINETTE MARINE

VG #12

MINESWEEPER HUNTER - MSH 1

Mission:

To hunt and neutralize all types of mines in **CONUS coastal waters** and the approaches to CONUS ports.



CHARACTERISTICS

LENGTH: 189 FT
NAV DRAFT: 13 FT 3 IN (OFF CUSHION)
8 FT 3 IN (ON CUSHION)
PROPULSION: DIESEL

	OFFICER	ENLISTED
CREW:	5	43

BEAM: 39 FT
HULL FORM: SURFACE EFFECT | SHIP
SPEED 10 KTS
HULL: GRP

EQUIPMENT: * Mine Hunting Sonar, SQQ-30 (Variant); Mine Neutralization System (Variant); RAYDIST (or equivalent)/SATNAV (GPS)/LORAN-C. *Equipment down sized for coastal mission.

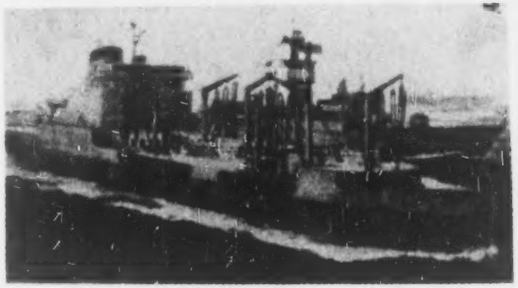
FUNDING	NUMBER	TOA REQUESTED	BUILDER
FY 1986 PROGRAM:	4 SHIPS	$184.5 MILLION	BELL AEROSPACE

VG #13

FLEET OILER TAO 187

Mission:

To provide rapid replenishment of petroleum products to operating forces at sea.



CHARACTERISTICS

LENGTH:	677.5 FT	CREW:	95 MSC/21 USN
NAV DRAFT:	35.0 FT	BEAM:	97.5 FT
SPEED:	20 KT Sustained	CAPACITY:	180,000 Barrels
PROPULSION:	Medium Speed Diesel		

FUNDING REQUEST	NUMBER	TOA * REQUESTED	BUILDER
FY 1986 PROGRAM	2 SHIPS	$328.5 MILLION	TBD

VG #14

OCEAN SURVEILLANCE SHIP: TAGOS

Mission:

As a unit of the Military Sealift Command, to collect, process, and transmit acoustic data.

CHARACTERISTICS:

	OFFICER	ENLISTED	TECHNICIANS
CREW:	8	11	7

LENGTH: 226 FT
NAV DRAFT: 15 FT
PROPULSION: DC ELECTRIC MOTOR DRIVE

BEAM: 43 FT
DISPLACEMENT: 1980 TONS
SPEED: 11 KTS

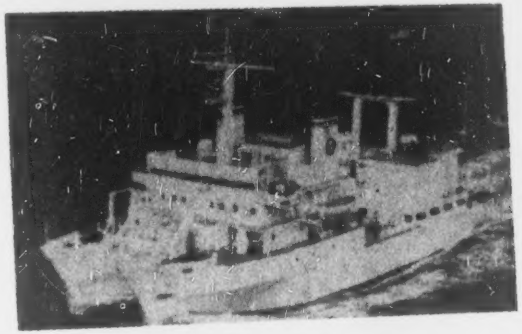
FUNDING REQUEST	NUMBER	TOA * REQUESTED	BUILDER
FY 1986 PROGRAM:	2 SHIPS	$115.1 MILLION * INCLUDES ADVANCE PROCUREMENT	TBD

VG #15

ACOUSTIC RESEARCH SHIP: AG

MISSION:

To transport, deploy and retrieve acoustic arrays, conduct acoustic surveys in support of the Submarine Noise Reduction Program, and to perform acoustic testing.



CHARACTERISTICS

LENGTH: 246 FT
DRAFT: 22 FT
SPEED: 10 KTS
HULL FORM: CATAMARAN

CREW: 65
BEAM: 90 FT
DISPLACEMENT: 3,860 TONS

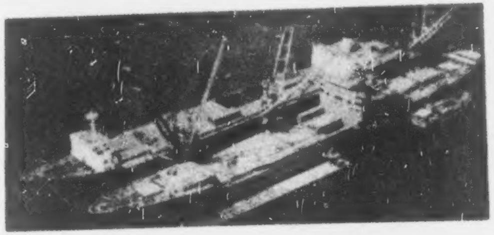
FUNDING REQUEST	NUMBER	TOA REQUESTED	CONVERSION YARD
FY 1986 PROGRAM	1	$68.9 MILLION	TBD

VG #16

AUXILIARY CRANE SHIP: TACS

Mission:

These ships, with their permanently installed heavy lift cranes, are capable of self-unloading heavy cargo and unloading non-self-sustaining container ships and other ships alongside. The TACS ships will be maintained in a high degree of readiness in an inactive status either in the continental United States or stationed in a forward area. When activated, the ships will be crewed by merchant seamen and will be operated by Military Sealift Command (MSC).



CHARACTERISTICS

			OFFICER	ENLISTED
LENGTH:	669 FT	CREW: MSC	18	71
DRAFT:	33 FT			
SPEED:	20 KTS	DISPLACEMENT:	31,500 Tons	
BEAM:	76 FT			
PROPULSION:	STEAM			

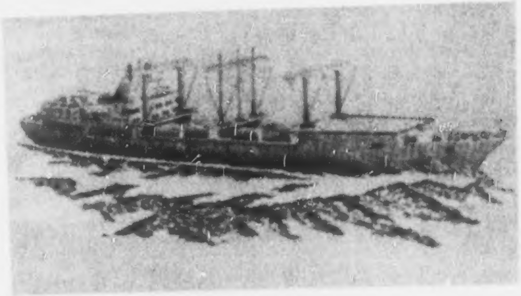
FUNDING REQUEST	NUMBER	TOA * REQUESTED	CONVERSION YARD
FY 1986 PROGRAM:	3	$82.5 MILLION	TBD

VG #17

AVIATION LOGISTICS SUPPORT SHIP:TAVB

Mission:

To provide dedicated sealift for movement of a functional aviation Intermediate Maintenance Activity (IMA) to support rapid deployment of USMC fixed and rotary wing aircraft.



CHARACTERISTICS

			OFFICER	ENLISTED
LENGTH:	602 FT	CREW:	2	39
DRAFT:	29.8 FT	BEAM:		90 FT
SPEED:	23 KNOTS	DISPLACEMENT:		23,872 LT

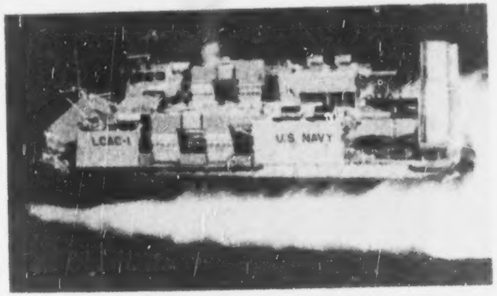
FUNDING REQUEST	NUMBER	TOA * REQUESTED	CONVERSION YARD
FY 1986 PROGRAM	1	$26.9 MILLION	TODD-GALVERSTON

VG #18

LANDING CRAFT AIR CUSHION - LCAC

Mission:

The LCAC program has been established to transport weapon systems, equipment, cargo, and personnel of the assault elements of the Marine Air/Ground Task Force from ship to shore and across the beach.



CHARACTERISTICS

LENGTH:	87 FT 11 IN
BEAM:	47 FT
PROPULSION	GAS TURBINE
CARGO DECK AREA:	1,809 SQ FT

	ENLISTED	
CREW:	5	OPERATOR ENGINEER NAVIGATOR LOAD MASTER DECK HAND ENGINEER
DESIGN PAYLOAD:	60 Tons	
OVERLOAD PAYLOAD:	75 Tons	
SPEED:	40 KTS with payload	
RANGE:	200 NM with payload	

FUNDING REQUEST	NUMBER	TOA * REQUESTED	BUILDER
FY 1986 PROGRAM:	12 CRAFT	$307.0 MILLION *INCLUDES ADVANCE PROCUREMENT	BELL AEROSPACE/TEXTRON PLUS SECOND SOURCE

VG #19

CRAFT

	PROGRAM	QUANTITY	FUNDING
SERVICE CRAFT	YC	2	$ .7M
	YD	2	$13.2M
	YFN	2	$ 1.4M
	YFRT	1	$41.8M
	YP	6	$22.4M
LANDING CRAFT	SWCM	3	$34.4M

VG #20

OTHER SHIPBUILDING

	FY 1986
MOORED TRAINING SHIP	$ 26.5M
OUTFITTING	$228.5M
POST DELIVERY	$112.6M
STRATEGIC SEALIFT	$203.4M
NET FUNDING REQUIREMENT	$571.0M

MANNING OF 600-SHIP NAVY

Senator **Rudman**. Thank you, Admiral Metcalf.

Admiral Fowler.

Admiral **Fowler**. I have no prepared opening statement, Senator.

Senator **Rudman**. Let me start out with a little arithmetic here. Maybe you can help me with this arithmetic, looking at your statement. You say that:

> The 600-ship Navy, with the 15 carriers called for by the President's maritime strategy, will be in place by the end of this decade. The fleet has increased from 479 battle force ships in 1979 to 545 by the end of this year. The level will be achieved with funds already appropriated. As of February 1, 1985, there were 103 naval ships under construction or conversion at 21 different U.S. shipyards.

Five hundred and forty-five and 103 where I come from is 648. Are you deducting from that 648 certain ships which are going to be retired over this next 2-year period?

If so, how many and what is the effect of whatever that resultant number is in terms of manning?

Whoever would like to answer that, feel free.

Admiral **Metcalf**. Yes; it is the result, it is a delta, between that and 600 ships in 1989. But our ships are going out. Older ships that reach the end of their useful life are being retired as new ships are commissioned.

Of course, the manpower increases in our program this year reflect what is required to man the ships that we need in the immediate future. What we have is that delta, ships going out, ships coming in. It it accounted for. There is no double accounting.

Senator **Rudman**. You say out and in. You are talking about coming into the service and being decommissioned?

Admiral **Metcalf**. Yes, sir; when I say out, I mean decommissioned, sir.

Senator **Rudman**. Is your answer that, although the numbers vary, between now and 1990 we essentially stabilize at 600 or do we have something more than that?

Admiral **Metcalf**. Essentially we will reach 600 in 1989. We are increasing the number each year through 1989 because more are coming in than are going out.

Senator **Rudman**. I think for the record it would be very good for this committee as a future document to work with, particularly as we are looking at manning requirements. If I understand this correctly then, what you are saying of the 545 in service at the end of the year, between now and 1990 a number of those will be coming out of service, 103 will be going into service.

The net difference between those you refer to as delta will eventually end up at 600?

MAINTAINING PERSONNEL STRENGTHS

Mr. **Pyatt**. Our out-year planning continues at 600.

Senator **Rudman**. What happens, Admiral Metcalf or Mr. Pyatt, if due to fiscal restraints, some of your manpower requirements are in fact denied by this committee or the Congress as a whole and that the growth in manpower, uniformed manpower, I am talking about, is not given to you?

Do you then have a plan to take people from some of the other support commands and move them into manning these ships?

Admiral METCALF. We have had to do this in the past, as you are aware. Before 1980, we had to make a balance between what the shore establishment contributed to readiness, as well as where we could take those cuts.

We learned very plainly in the 1970's how to do that. The net result is a decrease in readiness. But we will, given our responsibilities to man the ships of the fleet, make the best possible balance that we can, sir.

DISSOLUTION OF TWO COMMANDS

Senator RUDMAN. Now, Secretary Pyatt, just to follow that point, has proposed the dissolution or discontinuance of one or two commands, I guess you would call them—I call them bureaucracies—over in the Department of the Navy.

Which were those which he has recommended for removal?

Mr. PYATT. The Chief of Naval Material currently has about 650 people and about 450 would be removed.

Senator RUDMAN. Theoretically unless those 450 slots were put someplace else, Admiral, how many include officers and men, are one of our DDG's, FFG's?

Admiral METCALF. The complement of the FFG 7 class is about 180.

Senator RUDMAN. The new destroyer, DDG-51, the Spruance class?

Admiral METCALF. The Spruance class has 279 people and the DDG-51 will have 303.

Senator RUDMAN. If you find 450 people, you can staff a destroyer and you can staff a frigate. That is what you have to do. You have to find some people; is that right?

Admiral METCALF. I think the people that are going to be taken from the Naval Materiel Command aren't exactly——

Senator RUDMAN. I am sure they are not, but they are sailors, Admiral. I have to tell you they can get their sea legs back if they have to and lose a little weight. Obviously, they are not the right people, but we are talking a macronumber, so many people you have to move people around.

Admiral METCALF. If you take a sum total of 450 out and clearly——

Senator RUDMAN. You can staff two more ships. If this sounds familiar to you, I have been talking about this the last 3 or 4 months, as you know.

Mr. Pyatt, let me go on to a couple of number situations.

Based on current estimated cost of five Trident submarines begun since 1980, over $400 million in appropriated funds appear to be excess. Primarily, these savings result from actual shipbuilding contract prices compared to the estimate used when funds were originally appropriated.

Mr. Secretary, in this an accurate estimate that we have here, that $400 million, almost a half billion dollars?

Mr. **Pyatt**. As the Tridents have come along, and the implications of the D-5 nailed down, I think that is a sound estimate.

Senator **Rudman**. I guess that is good news. I would think you would want to talk about that.

Mr. **Pyatt**. We want to be sure we are right because the problem of announcing good news before it is really good news can be a disaster.

TRIDENT

Senator **Rudman**. Continuing on the Trident, in June 1982 the Secretary of Defense said each Trident beginning with the ninth ship started in fiscal year 1981 would be configured with the Trident II (D-5) missiles system. Original estimates for the change were $85 million in nonrecurring costs and about $20 to $25 million in recurring costs for installation of ship modifications.

We now have four Trident II (D-5) type ships under construction. What has been the actual cost for the ship modifications compared to the appropriated funding levels?

Mr. **Pyatt**. We are still trying to get it totally nailed down. I would say it is approximately right. We may be slightly under or slightly above.

Senator **Rudman**. When you do have that, even though the hearing record will be closed, the subcommittee would like that information.

Mr. **Pyatt**. Yes, sir.

[Clerk's note.—The information will be provided when available.]

COST OF TRIDENT II MISSILE SYSTEM

Senator **Rudman**. The cost of the Trident II missile system itself was originally estimated at about $360 million per ship which appears to be borne out through the fiscal year 1985 budget. However, the estimated cost of the fiscal year 1986 Trident II system appears to drop about $75 million.

Is that a little under or do you think now maybe the previous ships were overbudgeted for that system?

Mr. **Pyatt**. I said previously I think there is extra money.

Senator **Rudman**. You think that is part of it right there?

Mr. **Pyatt**. Yes; we are still trying to get the 1985 contract out. We will know more about it once we get it completed.

SSN-21 ATTACK SUBMARINE

Senator **Rudman**. Let me move away from current procurement to some of the future plans because as things are authorized and since we appropriate here, the famous bow wave that the chairman of this committee talks about a lot and I guess it is best to talk about the bow wave of the Navy—the Air Force does not understand it as well—you are requesting $367 million for the new design attack submarine, SSN-21. The new design SSN will have double the fire power of the current 688 class.

We also understand the submarine could cost as much as $1 billion a copy.

Given budget constraints, which is your higher priority? Continued SSN development funds or the fourth construction SSN-688?

Mr. **Pyatt**. Within the President's budget we can accommodate both.

Senator **Rudman**. This year you have. I am looking forward.

Mr. **Pyatt**. Whatever comes out of this budget and appropriation process, we will have to come to grips with. We have shown you the 5-year plan under the current assumption.

We have not come to grips with making outyear potential reallocation decisions.

Senator **Rudman**. Is that estimate I have just stated something you people have been looking at? Is it possible this is a $1 billion submarine as an attack submarine?

Mr. **Pyatt**. Yes.

SLIPPAGE IN SUBACS PROGRAM

Senator **Rudman**. We understand there has been some slippage in the submarine's advanced combat system R&D program, SUBACS program. You have had to slip hardware deliveries for integration by at least 4 to 6 months and you have had a problem redesigning a portion of the system.

Will there be much of a cost overrun in that or is the Navy protected in its contractual relationships with the prime contractor?

Mr. **Pyatt**. The Navy is currently on a cost-plus R&D contract so there is very little cost protection. We are trying to restructure it to put a ceiling on it, but it has not been accomplished.

Senator **Rudman**. What is your current estimate of the current overrun and what was the original budget amount and where do you think this may go?

Mr. **Pyatt**. I don't remember the original and I would like to furnish that for the record.

We are currently talking several tens of millions of dollars R&D overrun.

Senator **Rudman**. Who is the prime contractor?

Mr. **Pyatt**. IBM.

Senator **Rudman**. IBM is the prime contractor?

Mr. **Pyatt**. Yes.

Senator **Rudman**. So, negotiation on that is with them?

Mr. **Pyatt**. Yes, sir.

Senator **Rudman**. It is the prime that is doing this particular work?

Mr. **Pyatt**. Yes, sir.

PROGRAM OVERRUN

Senator **Rudman**. In other words, there was a $153 million program shortfall, late delivery of hardware and software, technical problems with distributive system data business, and so forth.

Now you have two phases, basic and a second phase. That appears to us at least of having the potential for maybe a very serious overrun even far beyond what you have just stated.

Mr. **Pyatt**. We share your concern for the gravity and the seriousness of this situation. It is not good.

Senator **Rudman**. Admiral Fowler or Mr. Pyatt, tell us how something like this happens. Here you have IBM, a so much respected company, a good contractor, you get together with them and you make an estimate on technology.

Was there a lot of the state-of-the-art work that had to be pushed on this to get where you want to go?

How do mistakes of this magnitude occur? Is it possible that maybe they are known with knowledge and foresight, that maybe the figures were known at the time, but for one reason or another they weren't accurately reported up here?

How does this happen?

Admiral **Fowler**. Let me assure you, Senator, that they were not known at the time or inaccurately recorded. I don't recall exactly——

Senator **Rudman**. I did not necessarily mean by the Navy. I meant by those who put the numbers together.

Admiral **Fowler**. We had a very ambitious undertaking to develop a total combat system for a submarine. We took a step-by-step approach to develop the basic SUBACS System and to put it in the 751 which was an authorized 688 class submarine, and then continue with the development and add on the other items that we needed for the 1989 new construction submarine.

The 751 system is pretty well on track, pretty solid. As of now, we have not had any slips or difficulties even though that was a very tight schedule and very ambitious program. I am rather pleased with the way that is going.

Back in 1981 when our people were looking to what was going to happen in 1989 and how much it was going to cost, how long it was going to take and how difficult development was going to be with new technology involved and all those kinds of issues. I think reasonable men, intelligent people, just don't totally understand the cost of these things. They have simply increased.

We are in the process now of resorting all of that and trying to find ways to bring the cost down. We are taking the prudent steps that we can to get the kind of capability we think we need and make all the technical and operational characteristics and cost trade-offs to develop the right mix of capability and affordability. That process is going on right now.

OPEN END R&D CONTRACT

Senator **Rudman**. In fact, most of the overrun problems we seem to have tend to be more in the open-ended R&D type contracts that we have in procurement of hardware where you can renegotiate a price. There is one tremendous exposure to the Government.

Admiral **Fowler**. The reason we use an open-end R&D contract is because of the high risk. It is difficult to ascertain what it is in technical detail required to achieve the operational characteristics you need to have.

So, you use the high risk form of contract because it is a high risk situation.

Senator **Rudman**. In fact in many of these contracts you can't get fixed-price R&D contacts in certain areas?

Admiral **Fowler**. I think anybody who would have signed up with a fixed R&D contract early on would have been dumb.

Senator **Rudman**. You can't accuse IBM of that, can you?

Admiral **Fowler**. No, sir.

Senator **Rudman**. Mr. Stennis.

LHD-1

Senator **Stennis**. Mr. Chairman, I don't remember anything in which there has been more interest by the Navy and the Marine Corps than there is in this new proposed ship, the LHD-1. They are really earnest about it and the Marines themselves, almost to an individual, who know about the prospects, if they are called on to go to the ultimate route, say this is what they feel they need and must have.

There is one of those ships in the bill. I came from the Authorization Committee last week and the ship requested in this budget is in there as I am sure you know. There is a provision in there also for many long-lead items for two more ships. The authorization bill recognized that.

Ordinarily this is a year when you take out what you can, make reductions where you can. The Authorization Committee recognized the situation that you could take that money out, but they did not take it out, and authorized most of the procurement for future years.

As it now stands, the money, itself, will have to be found, so to speak, in other savings and leftovers and change of plans. So, for my part, I am very much satisfied with the need and also with the way this financing has proven itself.

I am rather conservative with money and I was not convinced a few years ago that we were going to save a lot of money on very expensive carriers by giving the authority for long-lead items, to buy them 2 or 3 years ahead of time. It did turn out that we saved money. It amounted to around a billion in dollars, $1.1 billion in actual savings.

I am convinced that they can do that in this case. So, in keeping with our need for this 600-ship Navy and the plans that are being made, I think one of the kingpins is this one ship in here plus planning to give the long-lead time provision, let it stay in there and let them buy these long-lead time items. I hope that will be the position.

Admiral, I notice you used strong language here about this ship that I have been talking about. I am sure you haven't changed your mind in any way.

Which one of you made that statement?

I suggest you emphasize it now. We do not have a great number of members here. I want to hear directly from you what you think about it.

Admiral **Metcalf**. I think the LHD is one of the key elements of this year's program. It is going to be a very, very versatile machine. It is an outgrowth of the LHA. We have learned how to use those ships.

We now have a design which we think will be even more versatile than the LHA. The ones we plan to build will allow us to make the program a viable program and we will be able to meet the Marine Corps lift requirements. It will not only take helicopters, but it will also accommodate the AV-8B type aircraft.

Senator STENNIS. Accommodate what now?

Admiral METCALF. AV-8B. That is the jump jet, as it is known, the Harrier. It is going to be a very, very effective combat ship.

Senator STENNIS. Mr. Secretary, do you have some additional remarks about this matter?

Mr. PYATT. No, sir. I mentioned it in my opening remarks. I said we put a lot of time in to make sure it is a good acquisition strategy, that is multiyear procurement for the three ships. We believe it is.

Admiral Fowler has put time into it. Our people have worked hard on developing it and we are confident we can save the $800 million we are talking about.

SAVINGS IN LONG-LEAD TIME ITEMS

Senator STENNIS. What do you really expect to save in this multiyear requirement of long-lead items?

Mr. PYATT. Our estimate for the three ships is $800 million compared to the budget authority that would be required to buy them one at a time.

Senator STENNIS. Is that your actual judgment on this now: the uniformed Navy thinks that much can be saved?

Mr. PYATT. Yes, sir.

Senator STENNIS. Is there any question about the need of these three ships if it all goes through?

Mr. PYATT. No. There is total agreement within the Navy and the Defense Department and Marine Corps on the utility of these ships, their mission, and the need for these three ships to provide Marine lift.

Senator STENNIS. Admiral, what do you say on this?

This is down to the bottom point now. You are testifying before the Appropriations Committee.

Admiral FOWLER. Senator Stennis, we believe those numbers. We use the same people, the same techniques to develop the cost savings on these LHD's that we do on the aircraft carriers.

We have every reason to believe that the credibility of these numbers is the same as the aircraft carrier where the savings are projected now to be even greater than we originally projected.

Then we have another factor involved here. These ships will be awarded to the contractors as a result of competition in 1986 which we did not have with the aircraft carriers. So, the competitive nature of this work will mean to me that there will be a real horse race for it in the industry and we ought to get some pretty good prices and pretty good results. The competition not only develops a good price, but it also develops a better effort all the way around.

So, we can expect technical performance and other things to be even better and keener as a result of the competition. I think these numbers are very supportable, very credible. I have no problem with them.

CAPABILITY OF LHD-1

Senator **Stennis**. Admiral Metcalf, I have a quote here from you. You said the LHD-1 is the most capable and versatile and amphibious ship ever built.

Admiral **Metcalf**. Yes, sir.

Senator **Stennis**. Those are strong words. Enlarge on that. Tell us more about what you do mean.

Admiral **Metcalf**. What I mean is that the ship will carry the ICAC which is the landing craft that skims over the surface of the water at over 50 knots carrying a tank, infantry, or other equipment. It allows the ship to do its mission outside of the range of enemy missile batteries and over the horizon, so that it can bring amphibious power to bear quickly in a sudden surprise attack.

We expect this to save lives and be a very, very effective ship. Having a helicopter capability and the capability of AV-8B's I spoke of, it has a capability like no other amphibious ship that we have ever built. It is versatile; it does the job; it is cost effective.

Senator **Stennis**. As a matter of fact, for years you gentlemen have been hoping and planning for a ship like this that will do these things. Isn't that right?

Admiral **Metcalf**. That is right.

Senator **Stennis**. I have been hearing about it for a long time.

Admiral **Metcalf**. There is an added utility to this ship. We think it can be converted completely for sea control or other missions with the vertical take-off jet aircraft. It is not its primary mission, but it could do that if there was the need.

MULTIYEAR PROCUREMENT

Senator **Stennis**. One other word about this multi-year procurement and cashing in on it. I was quite skeptical about this in the beginning: back when you tried it out on the carrier. Do you have any reservations about it now, based on the experience you have already had?

Mr. **Pyatt**. Absolutely not.

Senator **Stennis**. Thank you.

That is all, Mr. Chairman.

Senator **Rudman**. I will say, Senator Stennis, as a former trial lawyer to a former trial judge, I think you have built a pretty good record for this case.

Senator Proxmire.

Senator **Proxmire**. Thank you very much, Mr. Chairman.

It is a tough act to follow.

DDG-51 DESTROYER

Mr. Pyatt, let us talk for a minute about the DDG-51, the *Arleigh Burke* class of destroyers. The Navy plans to build two, I understand, in fiscal year 1987 for $1.1 billion a piece. That cost will go down some in fiscal year 1988 and fiscal year 1987 when the Navy wants to build 10 at $900 million apiece.

Are the fiscal year 1987 destroyers the most expensive the Navy has ever built?

Mr. **Pyatt**. They probably are. I also believe, based on the results that have come in from the recent competition, that those numbers will be revised downward.

Senator **Proxmire**. I hope so. It will be a new experience for me to see anything in the Defense Department be revised downward. It is in the right direction.

Mr. **Pyatt**. I think we have a track record of making actual savings compared to the President's budget request and to the appropriated funds in the shipbuilding budget in the last several years.

Senator **Proxmire**. I have never heard of a destroyer costing $1.1 billion. Of course, part of that, I suppose, is inflation. You have not built a destroyer in 3 years.

Mr. **Pyatt**. The last destroyer was the 963 class, which was first bought in the late 1960's.

DESTROYER COST COMPARISONS

Senator **Proxmire**. Can you give me any notion of the comparison in constant dollars how this compares with the cost of previous destroyers?

Mr. **Pyatt**. I will have to provide that for the record.

Current DDG-51 Cost Comparisons

The Navy did numerous cost comparisons during the DDG-51 program planning phases. The following table summarizes the estimated cost in constant dollars comparing recent ship classes with the DDG-51 Class.

Fiscal Year 1983

Ship:	*Millions*
DDG-51 class follow ship	$687
DDG-993 class follow ship (new buy)	680
DD-963 class follow ship (new buy)	650

The above estimates show that the DDG-51 follow ships, although much more capable, are very cost competitive with follow ships of other destroyer classes.

COST OF CARRIER TASK FORCE

Senator **Proxmire**. I understand in looking at your presentation here, I see that part of the mission is to serve as part of a carrier battle group.

Can you give me any global notion of what the cost of a carrier task force is now with the cost of aircraft carriers at the present level, destroyers, and so forth, overall?

Mr. **Pyatt**. I don't have a number at the tip of my tongue. I would like to submit it for the record.

Senator **Proxmire**. I would like to bring that up to date. I have talked about this a lot around the country. I have used figures that are probably much lower because they are back a few years.

Cost of Carrier Battle Group

Our estimate of the procurement cost of a notional Carrier Battle Group with airwing is approximately $12.2B in FY 85 dollars. The estimated 30 year life cycle costs for that Battle Group, including mid-life conversions, is $32.9B.

MINE COUNTERMEASURE SHIPS

Senator PROXMIRE. I would like to ask a few questions on the mine countermeasure ships the Navy is building.

How strong does the Navy support these ships?

Mr. PYATT. The Navy needs these badly. We put them in the program last year. When I appeared, there was going to be an attempt to cut them out in the appropriations process. I went around, myself, to members of the committee and made our case for the ships. We really went way out on a limb to support it.

Senator PROXMIRE. Would you give this a top priority?

Mr. PYATT. Again this year?

Senator PROXMIRE. Yes, sir.

Mr. PYATT. Not based on the performance of the shipbuilder in the last year. We are very disappointed with his performance.

Senator PROXMIRE. You would not give it top priority at the present time?

Mr. PYATT. When you go around and make a representation to members of the Congress, you need to have confidence that something good is going to happen. I made that representation last year and I have been disappointed in the ensuing year.

Senator PROXMIRE. Why were you disappointed?

Mr. PYATT. The whole ship is just not going well.

Senator PROXMIRE. The whole ship is what?

Mr. PYATT. The ship construction process just has not gone well. The lead shipbuilder is behind schedule and has not been able to transfer his plans totally to the second shipbuilder. It is just a disappointment.

Senator PROXMIRE. Is the cost higher than expected?

Mr. PYATT. Yes, sir.

Senator PROXMIRE. How much?

Mr. PYATT. We are trying to sort that out. We don't have the deal firmly put together. There is a 15- or 20-percent cost growth in the shipbuilding portion of the ship.

Senator PROXMIRE. Incidentally, I would appreciate it when you give me that data on the cost of the Carrier Battle Group, the ship investment cost, the annual operating cost and auxiliary support cost.

Mr. PYATT. Yes, sir.

FOREIGN-MADE ENGINES FOR MINE COUNTERMEASURE SHIPS

Senator PROXMIRE. I understand the Navy plans to buy foreign-made engines for the mine countermeasure ships from an Italian firm.

How does that affect the U.S. industrial base and how many supporting jobs when we purchase these engines from foreign suppliers?

Mr. PYATT. Under the international agreements that the Defense Department has with our NATO allies, they are allowed to compete for business for U.S. defense products. The Italians competed with a German firm and a couple of U.S. firms. The Italian company won with a price about half the U.S. price. So far that is the brightest point in the whole program. The engines have been doing extremely well. We are very pleased with them and the cost is below our original expectations.

BUY AMERICA PROVISIONS

Senator **Proxmire**. Is there any kind of Buy America applying here? Do they have to be 10 percent below the cost of American ships?

Mr. **Pyatt**. No. Under the MOU's that exist, all Buy American provisions are waived with our NATO allies.

REFURBISHING OF BATTLESHIP "WISCONSIN"

Senator **Proxmire**. Can you tell me about refurbishing the battleship *Wisconsin?*

I have an interest in that if only because of the name. What is the schedule to bring the *Wisconsin* out of mothballs and what will be the total cost for refurbishing it?

Mr. **Pyatt**. I don't have it. Maybe Admiral Fowler has it.

Senator **Proxmire**. I would appreciate it when you get that data if you will also tell me where it will be homeported. I expect we can't hope for Milwaukee, but as close as possible.

[The information follows:]

Homeporting of Battleship "Wisconsin"

We expect to commence bringing *Wisconsin* out of mothballs in Fiscal Year 1986. $475.9 million are identified in SCN for this purpose. The ship will be homeported in Corpus Christi, Texas.

COMPETITION IN SHIPBUILDING

Senator **Proxmire**. I would like to ask Mr. Pyatt and maybe I can pick up this other information from Admiral Fowler a little later on, Mr. Pyatt, you say one of your goals is increased competition, to increase competition in shipbuilding.

Mr. **Pyatt**. Yes, sir.

Senator **Proxmire**. I strongly urge you to pursue that goal. Yesterday we had a hearing with the people from General Dynamics. That is a very sorry and sad situation about what lack of competition can do to efficiency in Navy shipbuilding.

We learned from the General Dynamics investigation the lack of competition locks us into a more inefficient shipbuilding operation.

What has the Navy learned from the General Dynamics situation and how are you applying these lessons to the future shipbuilding projects?

Mr. **Pyatt**. Of the lessons coming out, number one, I learned the same lesson on competition that you just described. Competition does a lot of good things for us. It controls price and improves quality.

Also, the efforts of managers competing against each other causes them to look at themselves more closely to determine where costs are occurring. So, I think there are many of the same lessons you just described.

The other parts that are unfolding, the Veliotis matter, the idea that a man can come from outside the United States and perhaps take secrets out of the United States to a foreign country; I am totally shocked about that whole episode.

I guess I really come back to the fundamental issue; if you have more competition, a lot goes on that controls costs and that is good.

One of the lessons I learned from the earlier part of the submarine program is that if you get into a situation of competition, where the total facts about building the ships weren't known, as at the beginning of the 688 program, and you don't have the designs done and neither of the parties know exactly what is involved, you can wind up with some impossible contract situations.

That has been the evolution of our philosophy of build the lead ship, approve the lead ship, then wait a year and go for the successor ships.

SUBMARINE CONSTRUCTION COMPETITION

Senator **PROXMIRE**. It is puzzling to me and to many Americans that these firms seem to do a whale of a lot better from a profit standpoint on defense contracts, much better than they do on their other work. They make a return on equity that is higher, profits are higher.

Yet somehow we can't seem to get competition. The difficulty with competition on submarines is, I understand, that you have only two potential suppliers, Newport News and General Dynamics, nothing else.

Mr. **PYATT**. Yes, sir.

Senator **PROXMIRE**. Why is it that we can't get other firms interested and involved when the profit picture is so inviting?

Mr. **PYATT**. I know all the shipbuilders in this country and I have never had any of them come to me and say, "We would like to get into the submarine business."

When I mention it to them, they show no interest. It is a major undertaking to develop the capability to build a nuclear submarine. It is not a business decision to be taken lightly and then face up to producing that system on a fixed-price basis.

Admiral **FOWLER**. Senator, my 1981 testimony before, I believe, all four of the committees, stated that I thought it was prudent that we have three yards building submarines. That was based on the overall size of our submarine program and what we see our potential enemies doing in submarine construction in their own submarine facilities.

We have not pursued that objective because we had higher objectives to pursue during this period of time. I continue to believe what I stated at that time.

We have the Trident submarine as a sole-source submarine to EB. We have only two builders of nuclear submarines and it is very difficult, and very expensive, to bring on a nuclear submarine building yard. It is a matter of cost and priority as to whether that needs to be done or not.

Senator **PROXMIRE**. Admiral Rickover used to talk about a Government yard, as a yardstick, for one thing, and also to the extent if you only had two suppliers, maybe you could make a case for a Government production.

Nobody likes Socialism, heaven knows I don't. On the other hand, we need competition. We have this scandulous situation here. It seems to me we ought to give that very careful consideration.

Admiral Metcalf, when do you expect the next Trident submarine to be deployed, that is, the *Alaska*?

Admiral **Metcalf**. Alaska is scheduled to go on sea trials in September.

POSSIBLE DISMANTLING OF POSEIDON

Senator **Proxmire**. To stay within the SALT limits, you would have to dismantle the Poseidon submarine.

Has any decision been made to dismantling a submarine when the *Alaska* goes on line?

Admiral **Metcalf**. That is out of my line. I will have to get that for the record.

[The information follows:]

Submarine Dismantlement

No decision has been made on dismantling a POSEIDON submarine when the ALASKA goes on sea trials in September.

CASE DISMANTLING DECISION

Senator **Proxmire**. Have preparations been made in the case dismantling decision made by others?

Mr. **Pyatt**. Some of the initial planning has been done.

Senator **Proxmire**. Thank you.

Thank you, Mr. Chairman.

NUMBER OF ACTIVE YARDS

Senator **Rudman**. Admiral Fowler, I ask this not because the Portsmouth Naval Shipyard is in New Hampshire, but this is an interesting issue.

There is concern about the number of yards we have, not only in terms of building submarines, but overhauling submarines. It is my understanding at the present that due to drydock limitations, there are a number of our submarines and those coming on line, for instance, that could not be overhauled at certain yards. Public yards I am talking about.

Is that correct?

Admiral **Fowler**. We have six naval shipyards that are nuclear qualified. All six nuclear shipyards are in the overhaul business. We have adequate capacity for the overhaul of submarines.

Some of the shipyards have constructed submarines in the past. I believe the last nuclear submarine constructed in a naval shipyard was delivered in 1972.

PORTSMOUTH NAVAL SHIPYARD

Senator **Rudman**. What about the claim from the people in the shipyard in New Hampshire—Senator Cohen says it is in Kittery, ME, but we call it the Portsmouth Naval Shipyard—without new drydock facilities, there will come a time when they will not be able to fulfill any substantial mission for the Department of the Navy.

Is that accurate?

Admiral **Fowler**. I can foresee no time when they could not perform substantial missions. Portsmouth is one of our older and more constrained shipyards because of geographical limitations. It has a drydock. There is a capital investment problem if you are going to continue on in the foreseeable future.

I see no hard constraints that would put them out of business, so to speak, in a reasonable period of time.

Senator **Rudman**. Are they currently able to overhaul 688's?

Admiral **Fowler**. Yes, sir. They are currently overhauling the *Philadelphia* and they are doing a superb job of it.

Senator **Rudman**. How is their production schedule coming along in terms of both time and cost?

Admiral **Fowler**. They have been slipping some schedules, they had the *Jack* in there recently that is sort of a problem ship. It is one of a kind. That slipped over into the *Kenosha*.

Just before the *Jack* they had problems with *Archer Fish*. I am not totally pleased with their performance. They are doing well on the *Philadelphia*.

Senator **Rudman**. How are they compared with the other public yards?

Admiral **Fowler**. They are in the lower half in overall performance. Their present performance on the *Philadelphia* which is the third of the 688's to be overhauled, is on a par with the Norfolk yard which is doing the second overhaul of the 688 and better than Pearl Harbor Naval Shipyard that did the first overhaul of the 688, the *Los Angeles*.

Senator **Rudman**. It is a mixed bag.

Admiral **Fowler**. It is always a mixed bag, good days and bad days, no matter who you are.

YARD PERFORMANCE COMPARISONS

Senator **Rudman**. Will you supply for the record, please, your latest evaluations of their performance compared to other yards?

I get a lot of communications from the unions up there. I would like to be able to tell them what the Navy is telling me.

Admiral **Fowler**. Yes, sir.

[The information follows:]

Shipyard Comparisons

The comparison I just provided is currently valid. Portsmouth currently ranks in the lower half of all naval shipyards in overall performance. However, the shipyard is demonstrating good cost and schedule control on USS *Philadelphia* and that overhaul compares favorably with the overhauls of the lead and second submarines in the SSN 688 class.

TOTAL HULLS IN CURRENT FLEET

Senator **Rudman**. Senator Sasser, do you have some questions?

Senator **Sasser**. Yes, Mr. Chairman. Thank you.

Mr. Pyatt, the Armed Services Journal recently had an article which stated, and I quote, that: "Secretary Lehman has built a 600-ship Navy. Now he is building a 700-ship Navy."

The article went on to say, and I am still quoting: "In fact, depending on how you count his ships," talking about Secretary Lehman, "he may be building an 800-ship Navy."

How many hulls of all ship classifications does the Navy currently have in the fleet?

Senator RUDMAN. Mr. Pyatt, will you yield?

We went into that before you got here. It is a long answer for the record. I would like him to repeat it for your benefit.

I have asked him for additional information for the record.

Mr. PYATT. That only indicates that the imagination of the press is unlimited. I wish it were all true.

Senator SASSER. You had better be careful, Mr. Secretary. They are here.

Mr. PYATT. I know. That is the reason I am talking to them.

In my testimony we said that the fleet has increased from 479 battle force ships in 1979 to 545 by the end of this year. There are 103 currently under construction. The discussion we got into a bit earlier was that those under construction are in various stages of construction for delivery at various times.

During that time some of the 545 currently existing will be taken out of the active fleet. So, the net result will be achieving a 600-ship Navy by the end of 1989.

Our plan for the out years is to maintain that level.

Senator SASSER. So, any rumors of a 700- or 800-ship Navy is just that, rumors?

Mr. PYATT. I don't know whether you call it rumors or wishful thinking.

Senator SASSER. You say it is wishful thinking?

Mr. PYATT. I don't know. Someone may be wishing it were true.

BA FOR SHIPBUILDING

Senator SASSER. Mr. Pyatt, the request for Navy shipbuilding is $11.4 billion in new budget authority. Of this amount requested to be appropriated by this committee, only $581 million will be outlayed in fiscal year 1986. That is the lowest outlay rate of almost any other defense account, according to my information.

Now, I can understand why shipbuilding dollars outlay at a rate slower than other DOD appropriations, because it takes a long time to build a ship.

What I have difficulty understanding is the very slow obligation rates associated with the Navy's shipbuilding program. Shipbuilding, I think, is the only program in the Pentagon where the unobligated balances exceed the appropriations request.

OBLIGATIONS FOR SHIPBUILDING

Now, at the end of fiscal year 1986 unobligated balances will total $12.4 billion. Shipbuilding unobligated balances account for more than 25 percent of all of the DOD procurement unobligated balances, although appropriations for shipbuilding accounts for only 11 percent of DOD procurement.

What accounts for this extraordinarily slow rate of obligation for Navy shipbuilding?

Mr. **Pyatt**. There are several subissues. I tried to follow all the points you raised and I have part of them and we can go back to the other ones that I missed.

One factor is the shipbuilding budget itself. Escalation is budgeted separately. For the entirety of the shipbuilding program, it is obligated monthly or quarterly as bills come in.

So, while in fact we have a contractual obligation to pay escalation according to the index that we use, we in fact do not obligate the money until the event occurs. So escalation alone, I think, will account for a substantial fraction of the shipbuilding unobligated balance.

The second part of the question, I think dealt with outlay rates beginning with the first year. Most of the material outlays occur when you pay the bills. Those are the things that go into the beginning of the ship. You write a contract for suppliers and those bills come in many months and, perhaps, years later for outlays.

The early obligations during shipbuilding programs are when you buy the ship hull. Throughout the construction period you will find obligations to buy Government-furnished equipment, combat systems, radars, things we have to furnish. These are scheduled to avoid tying up money in equipment waiting dock side. We try to make it arrive when it is to be used. So, those obligations occur later in the program.

That is qualitative explanation of what goes on in the process. Many times people have made the observation that you just made and it really jumps out at you when you are used to other accounts.

The shipbuilding account is much different from any other line item or budgetary account in the defense program.

Senator **Sasser**. I don't want you to feel under any pressure, Mr. Pyatt, to obligate outlay funds that you might otherwise avoid doing. I was just curious about that.

BATTLESHIP REACTIVATION

Let me shift gears a minute and ask you about some of the battleships.

The Congress, as you know, approved the reactivation of three of the older battleships. The *Iowa* has been in service now for 2½ years. It was a controversial matter when it came before the Senate.

Do you plan a service life extension program for these old battleships or are they going to be retired from service?

Mr. **Pyatt**. We have not developed any plans beyond the use of them in their current configuration. The ships, in terms of years of usage, are very new. So, they have a good number of years of operational life remaining before we need to consider what may have to occur in terms of a service life extension.

Senator **Sasser**. What is the useful life of these reactivated battleships?

Mr. **Pyatt**. We are planning 20 years. Some of us think they will go much longer than that.

Senator **Sasser**. There was some controversy following one of the battleship's service in the Mediterranean associated with our presence in Lebanon about the 16-inch guns and accusations made that the guns not very accurate. I have been told that at a range of 22 miles the circular error of probability ranges anywhere from 200 yards to 600 yards.

At that extreme range the probability of hitting a target and destroying it would appear to be very low.

Of what value, then, is a reactivated battleship if it has difficulty hitting its target at its extreme range of 22 miles?

For today's missiles that is not much range at all. Some say we are still using World War II ammunition in guns and that is a problem. Is that correct?

Mr. PYATT. First, on the Lebanon situation, and then I would like to ask Admiral Metcalf to follow up.

It is my understanding that all the missions for which the battleship was called on resulted in success and the targets stopped firing. When you hit them, they shutdown and the result is the same.

The second point I would like to say is that we do have room to modernize the ammunition of 16-inch guns. There is a lot of new technology that has been developed since World War II that is quite useful in terms of ammunition.

The battleship renovation program has brought the ship up to date. It carries Tomahawk's, it carries Harpoon's, and is a very efficient platform for carrying these modern weapons. For the combat power carried on an individual ship, I think it is unmatched outside of an aircraft carrier or a ballistic missile submarine.

Admiral METCALF. Senator Sasser, I would like to give you something. What you have there is the fall of shots from the battleship with the U.S. Capitol in the center.

Senator SASSER. Admiral, you have to be careful. [Laughter.]

Somebody will be accusing the Navy of trying to pull off a coup here.

Admiral MECALF. I was just trying to put something down that we all can relate to.

Senator RUDMAN. Is the target center on the Senate side or House side? [Laughter.]

Admiral METCALF. We are trying to be ecumenical. It is in the middle.

Senator SASSER. I don't know. If I see the *Missouri* coming up the Potomac, Mr. Chairman, I am leaving.

AMMUNITION

Admiral METCALF. The issue of ammunition, you know, is an old one. We rework that ammunition. We found that you can rework it, which, of course, is the cheapest thing to do rather than to manufacture new powder.

The old ammunition was packed in silk bags. We now are rebagging the powder with better quality control, which gives us much better control of the velocity with which the shell leaves the barrel.

Now, at 22 miles the dispersion of the fall of shot of the gun is greater than it would be at, say, 20 miles. At 35,000 yards or less it is a very, very accurate system.

By using the firepower of the battleship you don't have to risk people in airplanes dropping bombs. It is the best way of getting lots of ordnance on target very quickly and very accurately.

WORLD WAR II AMMUNITION STOCKPILED

Senator **Sasser**. How much of this World War II ammunition do we have stockpiled?

Admiral **Metcalf**. One heck of a lot.

Admiral **Fowler**. Senator, I have carried a one-page listing of our inventory up here for the last 4 years and I dropped it out of my backup book this year—because nobody asked me that question—but it is in excess of 15,000 rounds.

Senator **Sasser**. Do you anticipate more modern munitions for 16-inch guns on the battleship?

Admiral **Metcalf**. More modern projectiles would have a better destructive capability within the projectile itself and possibly greater range.

At this time we have a modest R&D program looking into a cost-effective way to do it. Right now, from a warfighting perspective, I am happy with what the current projectiles will do to a target.

Senator **Sasser**. The accusation has been raised that the very large battleships are very vulnerable to cruise missiles and torpedoes. Frankly, I don't see they are any more vulnerable than an aircraft carrier.

But this accusation is raised and it would appear almost impossible to hide a battleship from a spy satellite since they are so large.

Why does the Navy say that the *Wisconsin,* for example, is a good investment? What do we tell people?

Admiral **Metcalf**. I guess I would like to tell the story about a question that was asked of the captain of the *New Jersey* concerning a guided missile hitting his ship, the EXOCET missile. He was asked what would happen.

His response was, "Well, I would use pipe sweepers."

What he said in effect is that the armor on that ship is such that most of the guided missile munitions hitting the topside of that ship would be ineffective. It is a pretty invulnerable system. Those ships, with their armor plating, were built for a different era to survive more destructive conventional ordnance than is available today or that we see the Soviets putting together.

Senator **Sasser**. Will that armor repel an EXOCET missile?

Admiral **Metcalf**. Yes, sir. It will take the paint off.

Senator **Sasser**. You would not have the same result as the EXOCET that hit those British destroyers?

Admiral **Metcalf**. No.

Senator **Sasser**. My time is up.

Thank you.

Senator **Rudman**. I have just a few more questions. But before I ask them and yield to Senator Kasten, I want to put in the record some questions submitted by the chairman of the full committee, Senator Hatfield, who would like them answered for the record.

There are also questions for the record from Senator McClure.

I just want to ask one question.

"SHEFFIELD" ARMAMENT

The *Sheffield* I recall had very light armor. It was even light by our light armor standards.

What was the *Sheffield* armament compared to the *New Jersey* armor?

I know the difference, but for the record.

Admiral **Metcalf**. The *New Jersey* goes up to more than 17 inches.

The *Sheffield* had no armor at all. It was sheet metal.

Admiral **Fowler**. The *Sheffield* was not a ship that we would call an armored ship at all.

Senator **Rudman**. I think it is an important distinction. I don't think the Navy would say that the *New Jersey* would withstand anything, but it would withstand that kind of assault.

Admiral **Metcalf**. We are talking about the present guided missiles.

Senator **Sasser**. It would not withstand a cruise missile with a nuclear warhead?

Admiral **Metcalf**. That is correct, sir.

Senator **Rudman**. Senator Kasten, do you have some questions?

Senator **Kasten**. Mr. Chairman, thank you.

MSH MINESWEEPER SHIPS

Admiral, in 1986 you plan to award a contract for four MSH minesweeper ships. Secretary Lehman said the Navy is now looking into the possibliity that one of those four might be second sourced.

Do you agree with the Secretary in his effort to promote competition for the minesweeper ships?

Admiral **Metcalf**. Could I pass that off to the Secretary?

Mr. **Pyatt**. We have discussed that possibility, but the Secretary also realized that we just completed competition for the first, I believe it is, nine ships. That was head-to-head competition.

We were trying to bring new technology to shipbuilding in the United States. The exact timing of when we bring in competition on the MSH is one we will have to sort through. We do plan to bring in competition to build the ships.

Senator **Kasten**. Your answer is that you do agree with the Secretary?

Mr. **Pyatt**. Of course; he is my boss.

Senator **Kasten**. In his effort to promote competition and move for a commitment on second source for the MSH's?

Mr. **Pyatt**. Absolutely. As I mentioned earlier, one of the fundamental concepts of our shipbuilding program is to build ships competitively; it is good for everybody.

Senator **Kasten**. Earlier this year the Navy put the majority of the 1985 shipbuilding conversion, Navy, appropriation funds for the MCM on deferral, stipulated that funds would remain on deferral until all the problems in the program have been worked out.

SHIPBUILDING CONVERSION ACCOUNT

Have the contractors now fulfilled this requirement for the Navy shipbuilding conversion appropriations account?

Admiral **Fowler**. We are in the final throes of working out all the technical issues with the contractors. We will be proceeding with that shortly.

Senator **Kasten**. Are the funds available for obligation and on what date can we expect the award to go forward?

Admiral **Fowler**. To the best of my knowledge, there was not, from a technical point of view, a deferral of the dollars, but they have been available for obligation right along. We will be proceeding here in the next few weeks.

Senator **Kasten**. Can we then assume it will be available for a June award date?

Admiral **Fowler**. I wouldn't want to commit myself specifically to June because things have a way of not happening when I would like them to happen. But that is not a bad assumption.

Senator **Kasten**. We are anxious to work with you in that direction. If you can do it before June, obviously, that is better. We want to work with you.

MINE COUNTERMEASURE SHIPS

It is my understanding that Senator Proxmire discussed the issue of the mine countermeasure ships. Last year Secretary Lehman testified that in all likelihood there would be a need for more MCM ships based on a new study of mine warfare, the mine warfare force projection, et cetera.

When do you expect that the report on the force projection of mine warfare is going to be available?

Admiral **Metcalf**. I don't know the study that you are talking about, sir. I think that we have a balanced program in our requirements for mine warfare ships.

To my knowledge, the study that we reported to the Congress previously still holds.

Senator **Kasten**. It is my understanding that the Secretary said in an Armed Services Sea Power Committee meeting, that we have now planned 14 ships to be built by 1989, 14 mine countermeasure ships.

Is this where we are going?

Admiral **Metcalf**. That is where we are going, sir.

Senator **Kasten**. Mr. Chairman, I have couple of other questions that I will submit for the record having to do with the projections on these ships.

I just want to point out that the lead contractor for the MCM program currently has 900 workers, 600 employees, 300 contracted out, all operating on these contracts. It is important that we don't go through the peaks and valleys, that we don't build the work force up, drop it down, build it back up and drop it down.

The number of people employed in Sturgeon Bay, WI, are people multi-capable in trades they can do. They can be at work in the shipbuilding business and they can be doing some other things.

The peaks and valleys I think have increased the costs and I think the peaks and valleys are not in anybody's best interests.

What we want to do is establish a program that is consistent, we can count on, you can count on, and that we can work through. The ups and downs I think are proving to be not efficient from anybody's point of view.

I just want to say, Admiral, that we want to work with you in order to try to establish a consistent program.

Mr. PYATT. I hope in following that line of discussion you will also work with the prime contractor to be sure he fully recognizes his obligations to the Navy to meet his contract within the target cost and on schedule.

Senator KASTEN. Absolutely. I think it is important that all of us work together in that regard and we are doing it.

With the team work we are talking about and partnership we are establishing, we will in fact be able to have a stable work force and also have the product which the United States of America needs and wants?

Mr. PYATT. We agree.

Senator RUDMAN. Senator Kasten, those questions will be submitted for the record.

BUDGETING FOR 688-CLASS

Before yielding to Senator Johnston, I have one brief question.

I notice in your SSN advanced procurement you have out of $585 million budgeted for the 688 class, 98 of that is for contractor-furnished material.

Your position is in your justification you want to take advantage of new techniques developed by the shipyard to accelerate the schedules.

I just wonder whether or not you have enough confidence in that to make an exception in his case. We normally didn't provide that kind of long lead-time money for contractor-furnished material.

Admiral FOWLER. Senator, you will recall that Electric Boat got in trouble years ago. At one point we had a backup there of some 20 submarines. They have been catching up now. Last December they delivered the 710 which is the last of the 1985 804 submarines.

The last 3 or 4 years they have shortened up the schedule. Now they are catching up with what we had traditionally done in buying Government-furnished equipment. The schedule has reached the point we have to start buying earlier in order to match their schedule.

We are just about neck and neck now. If they continue to improve, we will have to fund things earlier in order to get them to the yard in time.

The 751 in the SUBAC is a good example of how we have been going on a heel and toe schedule since 1983. Fortunately, it was worked out. If we are late in delivering our equipment, we are going to have a longer building period and higher cost.

Senator RUDMAN. The estimate of our ships requested in the ship budget are constructed within 54 to 61 months. In light of history and taking into account the impovements, do you think that is realistic?

Admiral FOWLER. I think so, yes, sir.

Senator RUDMAN. You think you need long-lead funds to do that?

Admiral **Fowler**. Yes, sir.

Senator **Rudman**. We will have to discuss that some more. We have some problems with that. But we will talk about it.

Senator Johnston.

Senator **Johnston**. Thank you, Mr. Chairman.

SHIPBUILDING BUDGETS

Admiral Metcalf, in your statement you indicate that the actual Navy shipbuilding cost for fiscal years 1983 and 1984 is $2.2 billion lower than was originally budgeted.

You also indicate that the Navy has already saved $250 million from the 1985 budget.

Given our best experience of the Navy's coming in under the budget for the last 3 years Congress might well try to anticipate further savings in our markup.

My question is: How firm are your cost estimates which are included in the 1984 budget?

Admiral **Metcalf**. I have great confidence in it, but I think Mr. Pyatt is in a much better position to answer that in a qualitative sense.

Mr. **Pyatt**. When we put the budget together, we did the best we could do. We recognize that the way the Defense Department does its programming, the Navy is given a certain amount of money and it is our job to squeeze into it as much as we can.

We also have to make a budget that we can execute because we don't want to come back for more money; that is called an overrun.

One of the things that has occurred, and we have discussed this, has been that the savings do occur. We think the 1986 budget is pretty good as it is.

However, we also know that as we go along and get more of the 1985 program executed and know what the prices are, we can make additional judgments as time progresses.

Senator **Johnston**. You are hopeful of being able to save more than in the past?

Mr. **Pyatt**. Absolutely. We don't want to pay more than we have to.

Senator **Johnston**. By the way, I want to congratulate you on that.

Can you give us any sort of tentative goals of what you hope to be able to achieve?

Mr. **Pyatt**. We would like to fully fund the battleship. That is a personal goal. The Secretary shares it.

Senator **Johnston**. What does that amount to?

Mr. **Pyatt**. That is about $450 million, part of which was brought up earlier in discussion on savings in the Trident program. It looks like we are going to have some savings from prior years when we get the Trident (D-5) firmly nailed down. We think there are savings there to apply against the program.

As time goes on, we will have to discuss them with you. We have tried to pursue that pattern during the previous years. We will do that again.

Senator **Johnston**. As I said, I want to congratulate you on that.

COMPETITION BETWEEN PUBLIC AND PRIVATE YARDS

In the 1985 appropriations bill you were provided funds for a test program to require the overhaul of two or more vessels by competition between public and private yards. The Secretary of the Navy was to certify prior to the award of the contract under the test that the successful bid include comparable estimates of all costs, direct and indirect, for both the public and the private shipyards.

What is the status of that program?

Admiral FOWLER. It is going well. We have hired an outside firm who are experts in that area, to come in and make sure we have done the right kind of things to get comparability.

Not only is it pretty tricky, but the rules of accountancy are mind-boggling. We want to make sure we have an independent judgment that tells us we are on the right track. We are proceeding along with our plans.

Senator JOHNSTON. Very well. This question would be to any or all three of you.

NAVY MATERIEL COMMAND

Can you speak further about the Navy Materiel Command and its abolition? Are you glad to see that and will it save a great deal?

Mr. PYATT. I think it will speed along our decision process. I think the Secretary has already announced there will be 450 billets that can be applied to something else.

Earlier in the discussion we estimated this added up to be enough billets to staff a destroyer and frigate.

Senator RUDMAN. We discussed that. I decided they could under my plan staff one frigate and one destroyer and have a few people left over. I am delighted to see that.

Admiral Metcalf observed they might have to have some retraining. I said they might have to lose some weight.

Senator JOHNSTON. Other than the people directly involved, is this unpopular or popular within the naval establishment?

Mr. PYATT. You will have to ask Admiral Fowler. I cannot say that during the process I have had too many people seek me out and say it is a dumb idea. I guess I take all of that and add it together and conclude that it has been a well-received decision.

Senator JOHNSTON. It has been within the Navy?

Mr. PYATT. Yes.

Senator JOHNSTON. How about the Secretary's idea of having some civilian types, not the old salts in charge of more and more procurement?

Mr. PYATT. I don't believe he said that.

Senator JOHNSTON. He said he would reserve 40 percent of the Admiral slots in procurement.

Admiral METCALF. I consider most admirals old salts. What you are looking at here is a plan to bring some of the saltwater into the process, because, after all, these officers who go into this material professional community will have to have done very well at sea or they will not be selected as material professionals.

The idea is to get a solid corps of people who understand the seagoing Navy and bring them in at the senior level. Hopefully, with a balance between the seagoing requirement and the material requirement, we will get a better product. It will have more warfighting capability for the dollar. That is the objective behind it.

Senator JOHNSTON. Press reports seem to indicate they were going to deemphasize the necessity for having been at sea, at least for a proportion of these people. Well, deemphasizing going to sea for the senior rank.

Admiral METCALF. An individual who goes into this program probably will not go to sea as a captain. But to get there, they will have to prove themselves as unrestricted line warriors. They will have to work well, perform well, to be considered as senior officers and flag officers in that program. They have to start off that way.

Senator JOHNSTON. In other words, the choice for that will be made on a flag officer level as opposed to the junior officer level?

Mr. PYATT. Or the captain level, senior commander and captain level. Basically it is a recognition that we need to do a better job of bringing together the experience of going to sea with the experience, and trials and tribulations, of building hardware. Both are very demanding professions.

You can't live under a system wherein someone doesn't know where his career or future career path leads. That is the reason for establishment of the material professional program. In the process we set aside 100 currently existing flag officer billets in the Navy that can be filled only by people who have pursued this professional path.

It attempts to recognize the importance that we must attach to spending the money that is appropriated every year.

Admiral METCALF. There is another aspect. There is a large number of material professionals who will come in at the junior grades, engineering duty officers, civil engineers and those sorts of people, who are in this program.

So, it is really, I believe, a means of getting a salting, if you will, of the senior people who are making some very key decisions relative to the dollars and what our equipment looks like and how it fights.

Senator JOHNSTON. They were talking about those who were educated at business schools and that sort of thing, to get them in this Materiel Command.

At what point in their careers would they be going to business school?

Admiral METCALF. I would hope they would go to graduate school after they have proven themselves as unrestricted line officers first.

Senator JOHNSTON. Would that be captain level?

Admiral METCALF. Probably commander level. We have a number of people who have been to postgraduate school early on in their careers who have had management training. So, it is conceivable that they could have got it at an earlier age.

I think what is going to happen as this program matures, and it is going to take a number of years to have that happen, is that people will say, I would like to go into a very technical program or a business program as my postgraduate as a lieutenant, lieutenant commander and key toward that, saying I am going to perform well at sea, I will take duty ashore and when I become a commander, I will opt to become a material professional.

That is how I think it will work. Clearly there will be people who will come into this program at various stages and get that training.

Senator JOHNSTON. I think I like very much what I think I understand about that. I am not sure how that works.

How does that agree within the Navy?

Admiral METCALF. Candidly, I must say it is a mixed bag. I think you have to recognize within an organization of this magnitude there are going to be people who will embrace it enthusiastically and others who don't.

I think the key issue is that it is to solve a problem which we perceive and I think that this is a way to get at the problem that we perceive exists, that we need to get more people with warfighting talents and other things into the business of procurement and design of weapons systems.

Nobody argues the objective. How to get there is an argument.

Mr. PYATT. Answering the question of how it has been received, in this case I have had several people seek me out and say, "How do I sign up?" There are at least a few people out there whose perception of the program as they understand it coincides with their personal professional goals.

Admiral METCALF. I have had the same experience, but I have had had the other side of the ledger, too. "I wouldn't touch that with a 10-foot pole."

The objective is good. We do want people who want to get into it, who want to stay in the line. I think it is a good balance.

SPECIALIZATION

Senator JOHNSTON. I very much support the idea of specialization. After all, this is a highly specialized, highly technical area that requires seasoning and experience and all that knowledge which you have acquired over a period of years.

It seems to me to take the senior flag people and going back and forth between line jobs and procurement is not the highest and best use of those talents. As the Secretary was saying, we are sort of going to upgrade the importance we place in procurement and weapon design and make that on a par with being a line officer.

I think that is recognition of the realities of the amount of money we spend and the importance of the decisions that are made at the procurement material level.

Thank you, Mr. Chairman.

Senator RUDMAN. Thank you.

I observe Secretary Lehman and the entire secretariat over there has demonstrated a lot of innovation in many areas in the last several years. Frankly, I think the other Services could learn something from some of the attitudes taken by Secretary Lehman.

I am sure he has not necessarily endeared himself all the time to what is generally called the blue suiters over at the Pentagon, but I think Secretary Lehman has fought for the Navy and fought for improvements.

I think what he has done in this area that Senator Johnston has been speaking about and more particularly in the area of utilization of personnel is very important. It certainly gives us less to be concerned about because we assume there is somebody over there looking out after things.

Senator Specter is here. He is not a member of the subcommittee, but is a member of the full committee. We are delighted to have him here.

I will yield to Senator McClure.

Senator McClure. Mr. Chairman, I will submit my questions for the record. I will be happy to yield my time to Senator Specter.

Senator Specter. Thank you very much, Mr. Chairman.

Thank you, Senator McClure.

BERTHING OF U.S. SHIPS

Secretary Pyatt, I would like to inquire about the status of the proposals to send the *Kittyhawk, Constellation* and *Ranger* to Philadelphia and I note some efforts made to berth them, but I also note the press reports of the Navy's argument in support of sending to Philadelphia, the proficiency developed by the work force there and the economies which are present in the Navy's SLEP Program with those vessels.

I would like your comment on it.

Mr. Pyatt. Our plan is to do all the SLEP work in Philadelphia. We have stated that. We see no reason to change this plan.

Senator Specter. That is fine. I like it, it is short and direct.

Let me raise a suggestion with you and that is as it relates to the plans to have a reduction in force at the naval yard.

There were proceedings back on March 6 when Secretary Lehman was present before the Senate Appropriations Subcommittee in which I participated briefly. There were on-the-record comments and off-the-record comments.

At that time Secretary Lehman thought there would be an opportunity to have any necessary reduction pretty much accounted for by attrition, perhaps the termination of some of the temporary employees.

I have since been informed that there may be an opportunity to have some reduction in force as a result of voluntary early retirements provided that the Philadelphia naval authorities are given that flexibility.

Isn't it realistic to have whatever reduction in force you need there through those routes as opposed to firing people who want to stay on and work?

Mr. Pyatt. One of the things we get into with this is the complexity of the personnel rules with which we have to deal. I have seen cases where we have started out talking about a RIF, but, in the end no one is RIF'd who didn't desire to leave.

Senator Specter. I appreciate that. I think that is an important point to make. I don't want to interrupt you, but I think that is very important.

NAVY YARD RIF'S

The fact sheet that was sent out by the Navy lists some 1,113 reductions in force and some 572 compulsory RIF's, firings. That has caused havoc with 1,100 Navy yard workers and 50,000 people in their families who rely on them for support.

What I would hope you would do, and I wrote a somewhat heated letter to the Secretary on this last week, I would hope that when you make these announcements, that you really wouldn't make them without tempering them with what you just said, that when you have prospective reductions in force, compulsory firings, there is a real likelihood that there might not be.

Mr. PYATT. The overall statement that went out was along the lines that replacements are going to occur. It is all very dependent on the individual yard. It also is very hard to say that is what will happen.

In order to cut the work force down to match the amount of work budgeted, and that is the basis of the whole process, when you get the process started, you need to state that RIF's may occur.

Senator SPECTER. I have two problems.

One is that the announcement on budget considerations to the Congress had a timing effect to look like pressure, whether intended or not. That is highly undesirable.

The second consequence is that it overstates the risks of those 1,113 possible and the 472.

I would urge you to make those releases with more sensitivity because of the consternation that it causes. It is not only Philadelphia with 1,100 people working and 50,000, considering families. It is 78,000 nationwide and 300,000 people, considering four or five people to a family.

There is a lot of anguish that results which I think could be avoided.

Mr. PYATT. I hope we can avoid anguish for any individuals involved. But we have to plan our industrial work force to match the job that we plan to do. We can't do it any other way.

Senator SPECTER. Secretary Pyatt, I understand that. But sufficient into the day is the evil thereof. So be it if it has to happen. But to put out a notice and make so many people apprehensive is——

Mr. PYATT. In the series of events that occurred in this particular instance, the first set of numbers that received nationwide notoriety was about twice the size of the numbers that were actually announced. Maybe that let some people off the hook.

Senator SPECTER. Mr. Secretary, you are doing it twice. I don't think you ought to do it at all.

PENN SHIPS

One final question. I see this morning in the Philadelphia Inquirer that there has been an allegation made by some of the Maryland Congressional District Penn Ship's inability to carry out a contract where Penn Ship at Chester is low bidder on a contract to build three Navy oiler ships.

I want to make a very brief statement, that I have been working very closely with Penn Ship on this, communicating extensively. It seems that given the problems of a State like Pennsylvania, let me underscore that our State has not shared in the economic recovery to the extent that the rest of the Nation has. A Senator has to spend a lot of time either providing new job opportunities or protecting the ones that are present, but I have worked closely with

Penn Ship, been there on a number of occasions, seen their facilities, talked to their management, gone through their financial status and tested their ability to deliver.

Having said that, may I ask you what is the Navy's attitude on these possible contracts with Penn Ship?

Mr. PYATT. We are in the middle of competition for these particular ships. Anything that I might say could be perceived as prejudicial to one of the bidders and I would prefer, unless the chairman directs otherwise, to say nothing.

Senator SPECTER. I won't ask the chairman to direct otherwise. I think that is a wonderful diplomatic statement. I suggest you incorporate that tenor on the RIF's. I accept that.

I will be supplying more information in a detailed letter later today, which is already in process, on the subject of the stability of Penn Ship and their worthiness as low bidder because I know you want to save all the money you can.

Senator RUDMAN. Would the Senator from Pennsylvania like to submit a copy of that letter for the subcommittee files?

Senator SPECTER. Yes; thank you for your courtesy.

Senator RUDMAN. Gentlemen, in police parlance what you have seen this morning is called the continuous interrogation technique. Just when you think you have answered the last question, somebody else shows up.

I will say the schedule of all of us Senators—Senator Andrews chairs two important committees, I have five other hearings and four of them are going on at the same time this morning.

I am delighted my colleagues have an interest in this.

I will yield to Senator Andrews.

Senator ANDREWS. Thank you, Mr. Chairman.

I appreciate your indulgence and understanding of our crazy system up here. Indeed we are interested in these hearings because this is where it is at. Not only are you the biggest chuck of money in a budget that we have to get under control, but defense of our freedom is basic to the preservation of our republic and has been for 200 years.

Mr. Secretary, I am glad you brought Admiral Fowler along. Admiral Fowler is by name a kinship in my home town, in North Dakota. As matter of fact, we had an Admiral Fowler who practically died in a fire in his quarters on the west coast about 10 years or so ago.

Admiral FOWLER. Yes, sir, I think so.

Senator ANDREWS. He is a long-time friend of ours and an outstanding naval officer.

WARRANTY LAW

Mr. Secretary, department heads in the Navy have sent me, at my request, a review about the warranty law which this subcommittee passed a year ago in the fiscal year 1984 DOD Appropriations bill that was to be implemented in the Navy's procurement process.

My review of the document shows that guarantees are being requested on the DDG-51 performance standards and cost.

Can you provide this subcommittee with an update on the benefits warranties provide in the procurement of the destroyer?

Mr. PYATT. In the solicitation that went out on the destroyer, we opened up the warranty to the competitive environment and let the shipbuilders propose something new, something more than our current warranty clauses.

All the shipbuilders, as I understand it, came back and expressed confidence in the product by offering warranties.

Senator ANDREWS. In other words, you gave them the opportunity to use their ingenuity to meet your warranty figures and it was a unique combination of American industrial ability and Defense Department needs?

Mr. PYATT. And competition works.

Senator ANDREWS. And competition does work.

Mr. PYATT. In the sense that the winning shipbuilder proposed some extended warranties well beyond anything we have seen in the past.

Senator ANDREWS. So, you are getting better warranties than you have had in the past even in those areas where you asked for warrarties in the past because now they are mandated?

Mr. PYATT. Yes, and even in those areas which we discussed at this same hearing a year ago. It has resulted in the expansion of those warranties.

Senator ANDREWS. Mr. Secretary, then you are finding they not only work, but they are saving us money?

Mr. PYATT. I told you that a year ago and I will tell you that is so now.

Senator ANDREWS. We want to see down the line how it is functioning.

Plans are underway in other Services to place reliability and maintainability as high priorities in the criteria of procuring military equipment.

The Air Force before this subcommittee, Mr. Chairman, as you will recall, indicated that a fourth leg has been added to the cost, schedule, and performance drivers of military procurement so it now reads, cost, schedule, performance and reliability and maintainability. Of course, that is precisely what we need.

Can this subcommittee, Mr. Secretary, expect the same developments in the Navy, particularly in light of the fact that warranties are now required by law in the production contracts for military equipment?

Mr. PYATT. My observations across the Defense Department over a period of years has shown that Navy, primarily because of one individual, has had one of the more creative and demanding reliability programs of any Service.

A man came over to Navy from the Apollo program and proceeded to tranfer demands from that program to the Navy programs. In the process—I don't know how many times we stopped production lines, but it has occurred numerous times on air-to-air missiles. For example the Phoenix quality control problem was found in one of this gentleman's investigations. As you walk around the country and you ask if Mr. Willoughby has been there, the plant manager will begin to stutter, will stammer a little bit, and say, "The best thing that ever happened to me."

We have certainly dedicated ourselves to trying. We haven't converted it to the fourth leg of anything, but it really consists of the fundamentals of doing business and demanding quality and paying for it. We don't pay until we get it.

I think Mr. Willoughby's efforts, in particular, over a period of years have proven that.

Senator ANDREWS. Mr. Secretary, I appreciate the support you have given to this concept. You have really been a pioneer, the Navy has been. There are some characters buried over there in the Defense Department that somehow or other still aren't on the team.

As you know, DOD put out draft guidance when the warranty laws went into effect on January 1st this year. In my view it has serious shortcomings because of the problems in the past.

Has the Navy submitted a response to the guidance?

Mr. PYATT. I don't believe we have. I am sitting here trying to think about what we have sent back on that subject. I don't believe so.

Senator ANDREWS. If you have, could you provide a copy for the record.

Mr. PYATT. Yes, sir.

ANALYSIS OF DOD GUIDANCE

Senator ANDREWS. If you haven't, could you provide for this subcommittee your analysis of the DOD guidance that was put out on January 1?

Mr. PYATT. Yes, sir.

Senator ANDREWS. That would be most helpful.

[The information follows:]

DOD GUIDANCE

The DOD guidance was developed by the Defense Acquisition Regulatory Council with Navy participation. We concur with that guidance and implemented it within the Navy on 2 January 1985.

IMPLEMENTATION OF WARRANTIES

Senator ANDREWS. Finally, Mr. Chairman, I notice that the Navy is making impressive efforts to expedite the implementation of warranties.

Can you tell this subcommittee about these measures you are taking to implement the warranty law?

For example, have you set up any special task forces?

Mr. PYATT. Admiral Fowler is responsible for one of the organizations. Let us hear what he has to say.

Admiral FOWLER. Last year, Senator, we had our own policies and procedures, your amendment and the DOD guidance. Although complicated, we tried to reconcile all that.

I set up a group headed by myself with some of my senior contracts and procurement people and started from the ground up to establish that we would really like to have and what we would put in the shipbuilding program for 1986.

Part of that involved determined how the warranty worked and what data was available to us.

Lacking the people to do all that, we hired a contractor. I haven't had that report yet.

I am also proceeding to set up a Federal Advisory Committee which will provide a public forum to deal with the industry on what our policies should be. I am aiming at a coherent set of policies that will include the ship, the shipboard components, and the shipboard weapons, so that when we buy things, the warranties all have consistent compatibility and logic to them from componentry all the way up to the total ship.

That has proven to be a very tedious, time-consuming and considerable task. I would like to be able to report a lot more progress than we have at this moment, but I think we will have something by the time we let the 1986 budget contracts.

Senator ANDREWS. As you know, this is the first probable mandated systematic reform of the Defense Department in some 30 years. We think the law we passed is relatively simple. We feel that some of the bureaucrats sort of complicated it up.

We are glad you are ironing it out because you seem to be moving in the right direction.

Mr. Secretary, to follow up what Admiral Fowler just said, do you send out any special directives to contracting authorities?

Mr. PYATT. The only directive is, "don't ask for any waivers."

DIRECTIVES ON WARRANTIES

Senator ANDREWS. Could you provide any of these directives having to do with the warranty policing concept for the record and for the committee?

Mr. PYATT. Yes.

[The information follows:]

DIRECTIVE ON WARRANTIES

Subpart 46.7 of the Department of Defense Federal Acquisition Regulation Supplement is the current directive on warranties for the Navy. This directive was implemented within the Navy by the Chief of Naval Material memorandum dated 2 January 1985 which follows.

DEPARTMENT OF THE NAVY
HEADQUARTERS NAVAL MATERIAL COMMAND
WASHINGTON, D.C. 20360

IN REPLY REFER TO
4200
021B

2 JAN 1985

From: Chief of Naval Material

Subj: EXPEDITED DEPARTMENTAL IMPLEMENTATION; DOD FAR SUPPLEMENT SUBPART 46.7 - - WARRANTIES

Ref: (a) NAVMAT ltr of 20 Mar 1984, Subj: Implementation of Section 794 of the FY 1984 DoD Appropriation Act with DoD Policy Guidance
(b) NAVMAT ltr Ser 09/0324 of 4 Apr 1984, Subj: Implementation of Section 794 of the FY 1984 DoD Appropriation Act
(c) NAVMAT ltr of 8 May 1984, Subj: Section 794 of the FY 1984 DoD Appropriation Act

Encl: (1) OASN(S&L) Memo, same subject, of 27 Dec 1984 with encl (1) New DFARS Subpart 46.7 Warranties Coverage

1. Reference (a) implemented Section 794, Public Law 98-212 within the Department of the Navy. References (b) and (c) provided additional guidance and supplemented reference (a).

2. Enclosure (1) provides guidance and DoD FAR Supplement coverage (Subpart 46.7) on the use of warranties to implement the requirements of the New Section 2403 to Title 10 of the United States Code. This coverage is effective 2 January 1985 and supersedes the guidance previously provided by references (a) through (c).

J. S. SANSONE, JR.
Deputy Chief of Naval Material
(Contracts and Business Management)

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WRITER: R. MOYE, MAT-021B, X23553
TYPIST: l. mosson 12-31-84
DOCUMENT TITLE: 46.7

DEPARTMENT OF THE NAVY
OFFICE OF THE ASSISTANT SECRETARY
(SHIPBUILDING AND LOGISTICS)
WASHINGTON D C 20360

DAR Staff
Case 84-10

27 December 1984

MEMORANDUM FOR DEPUTY CHIEF OF NAVAL MATERIAL FOR CONTRACTS AND BUSINESS MANAGEMENT (MAT 02), HEADQUARTERS, NAVAL MATERIAL COMMAND
DIRECTOR OF ACQUISITION (ONR-600), OFFICE OF NAVAL RESEARCH
CONTRACTING OFFICER (M-10), MILITARY SEALIFT COMMAND
DEPUTY TECHNICAL DIRECTOR FOR SYSTEMS EVALUATION, POLICY, AND ACQUISITION (NDAC 10), NAVAL DATA AUTOMATION COMMAND
DIRECTOR, CONTRACTS DIVISION (MC-LB), HEADQUARTERS, U.S. MARINE CORPS

Subj: Expedited Departmental Implementation: DoD FAR Supplement Subpart 46.7--Warranties

Encl: (1) New DFARS Subpart 46.7 Warranties Coverage

The DAR Council at its meeting of December 20, 1984, approved the enclosed warranty provisions, a new Subpart 46.7 to the DFARS, for immediate distribution to field activities by the Military Departments and Defense Agencies. The effective date for these provisions is January 2, 1985.

All contracts for the production of weapon systems awarded after that date must comply with these provisions. For the purposes of this guidance:

(i) a modification to a contract to add additional quantities constitutes a new award;

(ii) the placement of an order under a basic agreement or basic ordering agreement constitutes a new award;

(iii) the definitization of a letter contract that includes a clause requiring definitization in accordance with law and regulations in effect at the time of definitization constitutes a new award;

(iv) the exercise of a priced production option where no further definition or negotiation of terms is required does not constitute a new award;

(v) the notice to proceed with quantities after the first year quantity in a multi-year procurement does not constitute a new award; and

(vi) the definitization of an existing redeterminable contract does not constitute a new award.

The attached coverage, printed in DAC format, including DAC Introductory material, will remain in effect until superseded by Defense Acquisition Circular 84-9 which is scheduled for distribution by 15 February 1985.

Michael D. Stafford

MICHAEL D. STAFFORD
Navy Policy Representative
Defense Acquisition Regulatory Council

Copy to:
N-OGC (DARC, Navy Legal Rep.)

DAC Introductory Item, DAC 84-9

Item I, The Defense Procurement Reform Act adds a new Section 2403 to Title 10 of the United States Code which among other things, requires that DoD obtain certain types of warranties in contracts awarded after January 1, 1985, for the acquisition of weapon systems. DAC 84-9 contains changes to the DFARS to implement the requirements of the new 10 U.S.C. 2403.

Because of the complex and extensive nature of the revisions required by 10 U.S.C. 2403, DAC 84-9 provides a completely new Subpart 46.7 of the DFARS which requires that each weapon system contract contain three specific warranties, one covering design and manufacturing requirements, one covering defects in materials and workmanship, and one covering essential performance requirements delineated in the contract. The new coverage also provides policies and procedures for tailoring the required warranties to the circumstances of a particular procurement, as well as mechanisms for obtaining waivers from the new requirements when properly justified, approved, and reported to Congress. Other significant topics addressed in the revised Subpart 46.7 include establishing essential performance requirements, applying the new warranties to foreign military sales, and analyzing the costs and benefits associated with obtaining warranties in specific situations.

It should be noted that the terms "guarantee" and "warranty," and all forms thereof have been used interchangeably in 10 U.S.C. 2403 and past legislation concerning warranties. For the sake of simplicity and consistency with the FAR, the revised Subpart 46.7 of the DFARS uses the terms "warranty and warranties" exclusively.

The Defense Acquisition Regulatory Council recognize the critical importance of tailoring new warranty provsions to the circumstances of widely differing acquisition programs and strategies within DoD. While the coverage ~~contained~~ in DAC 84-9 contains general guidance on tailoring, the Council is considering whether more detailed instructions, a sample warranties clause(s), or some other framework for structuring provisions for individual contracts may be useful. However, the statutory deadline for implementing the set precluded developing this type of additional coverage. The Council, therefore, is issuing DAC 84-9 in its present form, but solicits views and suggestions regarding adequate regulatory guidance that will allow appropriate tailoring of warranties.

A determination has been made under the authority of the Secretary of Defense that DAC 84-9 must be issued as a temporary regulation. Because 10 U.S.C. 2403 applies to all contracts for weapon systems entered into after January 1, 1985, circumstances make it impracticable to publicize the necessary implementing regulations for advance public comment. As noted above, however, public comments are solicited and may be submitted to the DAR Council until (insert date 60 days after publication in the Federal Register).

PART 46--QUALITY ASSURANCE
SUBPART 46.7--WARRANTIES

46.701 Definitions.

"Acceptance," as used in this subpart and in the warranty clauses at FAR 52.246-17, Warranty of Supplies of a Non-Complex Nature; FAR 52.246-18, Warranty of Supplies of a Complex Nature; FAR 52.246-19, Warranty of Systems and Equipment under Performance Specifications or Design Criteria; and FAR 52.246-20, Warranty of Services; means the execution of an official document (e.g., DD Form 250) by an authorized representative of the Government. The above clauses shall be modified accordingly in DoD contracts.

"Defect," as used in this subpart, means any condition or characteristic in any supplies or services furnished by the contractor under the contract that is not in compliance with the requirements of the contract.

46.702 General.

(d) Planning is an essential step in obtaining an effective warranty and should begin early enough to address warranty requirements during the development of the item.

(e) The acquisition cost of a warranty may be included as part of an item's price or may be set forth as a separate contract line item.

(f) Agencies shall establish procedures to track and accumulate data relative to warranty costs.

46.703 Criteria for Use of Warranties. The use of warranties in the procurement of weapon systems is mandatory pursuant to 10 U.S.C. § 2403, unless a waiver is authorized. Policy and procedures for obtaining such warranties or waivers are contained in 46.770. Acquisition of warranties in the procurement of supplies that do not meet the definition of a weapon system (e.g., spare, repair or replenishment parts) is governed by FAR 46.7. However, should the Government elect to obtain a warranty for such supplies, contracting officers should negotiate warranties that meet or exceed the requirements of 46.770 where such warranties are advantageous and in accordance with Departmental policy.

46.704 Authority for Use of Warranties. In contracts for other than weapon systems, the Chief of the Purchasing Office must approve use of a warranty except for:

(a) commercial supplies or services (see FAR 46.709);

(b) technical data, unless the warranty provides for extended liability see 46.708);

(c) supplies and services in fixed price type contracts containing quality assurance provisions that reference MIL-I-45208 or MIL-Q-9858; and

(d) supplies and services in construction contracts when the warranties contained in federal, military or construction guide specifications applicable to a given construction project are used.

Authority for use of warranties in the procurement of weapon systems is stated in 46.770.

46.705 Limitations.

(a) Except for contracts for the production of weapon systems under 46.770, contracting officers shall not include warranties in cost reimbursement contracts, except for those warranties contained in the clauses at FAR 52.246-3, Inspection of Supplies -- Cost Reimbursement; FAR 52.246-8, Inspection of Research and Development -- Cost Reimbursement; and at 52.246-7001, Warranty of Technical Data.

46.706 Warranty Terms and Conditions.

(b)(5) Markings. If items delivered under the contract shall be stamped or marked, it shall be done so in accordance with MIL Standard 129, "Marking for Shipments and Storage" and MIL Standard 130, "Identification Marking of U.S. Military Property."

46.708 Warranties of Technical Data. A warranty of technical data should be obtained whenever practicable and cost effective. The contracting officer shall consider the factors contained in FAR 46.703 in deciding whether to provide for warranties of technical data and whether there should be an extended liability provision (see 46.770-10). Particular emphasis should be placed on whether the extended liability is justified by (i) the likelihood that correction or replacement of the nonconforming data, or a price adjustment in lieu thereof, will not afford adequate protection to the Government, and (ii) the effectiveness of the additional remedy as a deterrent against furnishing nonconforming data.

46.770 Use of Warranties in Weapon System Procurements. This section sets forth policy and procedures for obtaining, pursuant to 10 U.S.C. § 2403, certain warranties from prime contractors when contracting for the production of a weapon system.

46.770-1 Definitions

"At no additional cost to the United States," as used in this section, means at no increase in price for firm fixed price contracts or at no increase in target or ceiling price for fixed price incentive contracts (see also FAR 46.707) or at no increase in estimated cost or fee for cost reimbursement contracts.

"Design and manufacturing requirements," as used in this section, means structural and engineering plans and manufacturing particulars, including precise measurements, tolerances, materials and finished product tests for the weapon system being produced.

"Essential performance requirements," as used in this section, means the operating capabilities and maintenance and reliability characteristics of a weapon system that are determined by the Secretary of Defense (or delegated authority) to be necessary for it to fulfill the military requirement for which the system is designed.

"Initial production quantity," as used in this section, means the number of units of a weapon system contracted for in the first program year of full-scale production.

"Mature full-scale production," as used in this section, means follow-on production of a weapon system after manufacture of the lesser of the initial production quantity or one-tenth of the eventual total production quantity.

"Prime Contractor," as used in this section means a party that enters into an agreement directly with the United States to furnish a system or a major subsystem.

"Weapon system," as used in this subpart, means a system or major subsystem used directly by the armed forces to carry out combat missions. By way of illustration, the term "weapon system" includes, but is not limited to the following, if intended for use in carrying out combat missions: tracked and wheeled combat vehicles; self-propelled, towed and fixed guns, howitzers and mortars; helicopters; naval vessels; bomber, fighter, reconnaissance and electronic warfare aircraft; strategic and tactical missiles including launching systems; guided munitions; military surveillance, command, control, and communication systems; military cargo vehicles and aircraft; mines; torpedoes; fire control systems; propulsion systems; electronic warfare systems; and safety and survival systems. This term does not include related support equipment, such as ground handling equipment, training devices and accessories thereto; or ammunition, unless an effective warranty for the weapon system would require inclusion of such items. This term does not include commercial items sold in substantial quantities to the general public as described at FAR 15-804.3(c).

46.770-2 Policy. (a) Unless waived under 46.770-9, after 1 January 1985, the Military Departments and Defense Agencies may not enter into a contract for the production of a weapon system with a unit weapon system cost of more than $100,000 or for which the eventual total procurement cost is in excess of $10,000,000, unless (1) a prime contractor for the weapon system provides the United States with written warranties that--

(i) the weapon systems provided under the contract conform to the design and manufacturing requirements specifically delineated in the contract (or any modification to that contract),

(ii) the weapon systems provided under the contract are free from all defects in materials and workmanship at the time of acceptance or delivery as specified in the contract; and

(iii) the weapon systems, if manufactured in mature full-scale production, conform to the essential performance requirements as specifically delineated in the contract (or any modification to that contract).

(2) the contract terms provide that, in the event that the weapon system fails to meet the terms of the above warranties, the contracting officer may --

(i) require the contractor to promptly take such corrective action as necessary at no additional cost to the United States,

(ii) require the contractor to pay costs reasonably incurred by the United States in taking necessary corrective action, or

(iii) equitably reduce the contract price.

(b) Contracting Officers may require warranties that provide greater coverage and remedies than specified above, such as including an essential performance requirements warranty in other than a mature full-scale production contract.

46.770-3 Tailoring Warranty Terms and Conditions. As the objectives and circumstances vary considerably among weapon system acquisition programs, Contracting Officers shall appropriately tailor the required warranties on a case by case basis, including remedies, exclusions, limitations and duration; provided such are consistent with the specific requirements of this section. (See also FAR 46.706). Contracting officers may exclude from the terms of the warranty certain defects for specified supplies (exclusions) and may limit the contractor's liability under the terms of the warranty (limitations), as appropriate, if necessary to derive a cost-effective warranty in light of of the technical risk, contractor financial risk of other program uncertainties. Contracting Officers are encouraged to structure broader and more comprehensive warranties where such are advantageous and in accordance with agency policy. Likewise, the Contracting Officer may narrow the scope of a warranty where such is appropriate (e.g., where it would be inequitable to require a warranty of all essential performance requirements because a contractor had not designed the system). It is Department of Defense policy not to include in warranty clauses any terms that cover contractor liability for loss, damage or injury to third parties.

46.770-4 Establishing Essential Performance Requirements. The Secretary of Defense or heads of military departments, or delegees, shall designate which features of a weapon system are its essential performance requirements. Essential performance requirements may be subsequently modified, superceded or cancelled by the Secretary of Defense or heads of military departments (or delegees) when such is in the interests of the Government.

46.770-5 Warranties on Government Furnished Property. A prime contractor shall not be required to provide the warranties specified in 46.770-2 on any property furnished to that contractor by the United States except for (a) defects in installation, (b) installation or modification in such a manner that invalidates a warranty provided by the manufacturer of the property, or (c) modifications made to the property by the prime contractor.

46.770-6 Exemption for Alternate Source Contractor(s). Agency heads may exempt alternate source contractor(s) from the essential performance warranty requirements of 46.770-2(a)(3) until that contractor manufactures the first 10 % of the eventual total production quantity anticipated to be acquired from that contractor.

46.770-7 Applicability to FMS. The warranty requirements of 46.770-2 are not mandatory for FMS production contracts. It is the policy of the Department of Defense to obtain for FMS purchasers the same warranties against defects in workmanship and material and conformance to design and manufacturing requirements as is obtained by the United States for similar purposes. DoD will not normally obtain essential performance warranties for FMS purchasers. The FMS purchaser shall be advised of the warranties normally obtained by the United States. If the FMS purchaser requests a warranty in the Letter of Offer and Acceptance (LOA), the United States shall obtain the same warranties on conformance to design and manufacturing requirements and against defects in material and workmanship that are obtained for U.S. supplies. If the FMS purchaser expressly requests a performance warranty, the United States will exert its best efforts to obtain the same warranty obtained on U.S. equipment or, if specifically requested by the FMS purchaser, a unique warranty. It is anticipated that the costs for warranties for FMS purchasers may be different than the costs for such warranties for the United States due to such factors as overseas transportation and any tailoring to reflect the unique aspects of the FMS purchaser. Special care must be exercised to ensure that the FMS purchaser shall bear all of the acquisition and administration costs of any warranties obtained.

46.770-8 Cost-Benefit Analysis. It is Department of Defense policy to only obtain warranties that are cost effective. If a specific warranty is considered not to to be cost effective by the contracting officer, a waiver request shall be initiated under 46.770-9. In order to determine whether use of a warranty would be cost effective, an analysis must be performed to compare the benefits to be derived from the warranty with its acquisition and administration costs. The analysis should examine a weapon system's life cycle costs, both with and without a warranty. Where possible, a comparison should be made with the costs of obtaining and enforcing similar warranties on similar systems. The analysis should be documented in the contract file.

46.770-9 Waiver and Notification Procedures. One or more of the weapon system warranties required by 46.770-2 may be waived if such waiver is in the interests of national defense or if the warranty obtained would not be cost-effective. Waivers may be granted by the Secretary of Defense, by the Under Secretary of Defense (Research and Engineering) for Defense agencies without the power to redelegate, or by the Secretaries of the Army, Navy and Air Force with the power to redelegate to no lower than an Assistant Secretary of the Military Department. Class waivers may be granted where justified. Waivers may be granted provided the following notifications or reports are made to the Senate and House Committees on Armed Services and on Appropriations--

(a) Major Weapon Systems. With respect to a weapon system that is a major defense acquisition program for the purpose of 10 U.S.C. § 139a, before granting a waiver, the waiving official shall notify the aforementioned Committees in writing of an intention to waive one or more of the required warranties. The notice of intent to waive shall include an explanation of the reasons for the waiver and shall ordinarily be given 30 days prior to granting such waiver.

(b) Other Weapon Systems. With respect to weapon systems that are not major defense acquisition programs for the purpose of 10 U.S.C. § 139a, waiving officials shall submit an annual report not later than 1 February of each year that lists waivers granted on such programs during the preceeding calendar year. This report shall also include an explanation of the reasons for granting each waiver.

(c) Weapon Systems not in Mature Full-Scale Production. Although a waiver is not required, if a production contract for a major weapon system not yet in mature full-scale production will not include a warranty on essential performance requirements, the waiving officials shall nonetheless comply with the notice requirements for major weapon systems.

(d) Processing Waivers, Notifications and Reports. Each Department shall issue procedures for processing waivers, notifications, and reports to

Congress. At the minimum, these procedures shall specify--

(1) Requests for waiver shall include--

(i) A brief description of the weapon system and its stage of production, e.g., the number of units delivered and anticipated to be delivered during the life of the program; and

(ii) The specific waiver requested, the duration of the waiver if it is to go beyond the instant contract and rationale for the waiver;

(2) Notifications and reports shall include-

(i) A brief description of the weapon system and it stage of production, and

(ii) Rationale for not obtaining a warranty.

(3) A written record will be kept of each waiver granted and notification and report made, together with supporting documentation such as a cost-benefit analysis, for use in answering inquiries.

(4) A copy of each notification and report to Congress shall be submitted concurrently to the Under Secretary of Defense (Research and Engineering). For class waivers this copy shall be submitted in advance of transmittal to Congress.

46.770-10 Special Contract Clauses.

(a) In accordance with 46.708, the contracting officer may insert a clause substantially the same as the clause at 52.246-7001, Warranty of Data, in solicitations and contracts when a fixed-priced or cost-reimbursement contract is contemplated that will require data to be furnished. When this clause is not used, technical data is warranted under the clauses at FAR 52.246-3, Inspection of Supplies - Cost Reimbursement; FAR 52-246-6, Inspection - Time-and-Material and Labor Hour; FAR 52.246-8, Inspection of Research and Development - Cost Reimbursement; and FAR 52.246-19, Warranty of Systems and Equipment under Performance Specifications or Design Criteria.

(1) If extended liability is desired and a fixed-price incentive contract is contemplated, the contracting officer may use the clause with its Alternate I.

(2) If extended liability is desired and a firm fixed-price contract

is contemplated, the contracting officer may use the clause with its Alternate II.

(b) In accordance with 46.770, the contracting officer shall insert in solicitations and contracts pertaining to the production of weapon systems a clause that describes the contractor's warranties on the weapon system.

JOINT SERVICE COOPERATION

Senator **Andrews**. Finally, have you instituted in the Navy, because it is working extremely well in the Navy, have you instituted any effort out of the Navy for joint service cooperation in refining this requirement and making it work better?

Mr. **Pyatt**. We have our hands full with the Navy. I have not instituted any outreach to other Services.

Senator **Andrews**. What I gather, Mr. Secretary, is that you are running a good warranty show and you think some of these other fellows will probably do essentially the same thing?

Maybe they ought to take a page out of your book, though.

Mr. **Pyatt**. I would say I don't know what they are doing. I signed up for certain responsibilities and they end with the Navy.

Senator **Andrews**. Of course, we would like you to share it with some of the more reluctant members of the team we have.

Could I also, Mr. Chairman, have Admiral Fowler submit the report he mentioned for the record.

Senator **Rudman**. That will be fine.

Senator **Andrews**. Thank you, Mr. Chairman. I appreciate the time.

Senator **Rudman**. Thank you, Senator Andrews.

[The information follows:]

When the analysis is completed, the resultant report will be furnished to the committee.

SUBMITTED QUESTIONS

Senator **Rudman**. Gentlemen, I see no more late arrivals. I don't know that we have any more.

I thank you all, Mr. Secretary, Admiral Metcalf and Admiral Fowler.

We do have a number of other detailed questions which I thought would be more appropriate for the record. We will submit them to you and we will incorporate your answers in the final hearing record.

Thank you for being here this morning.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

ADDITIONAL COMMITTEE QUESTIONS

New Design SSN

QUESTION: The New Design SSN will have to be procured in quantities sufficient to maintain a 100 force level attack submarine fleet. Affordablity has to be a concern, particularly if outyear budgets are reduced below current projections. What efforts is the Navy undertaking to maintain competition in the New Design SSN program?

ANSWER: Competition is maintained during contract design by awarding parallel contract design contracts to both Electric Boat and Newport News. The shipbuilders' efforts during the contract design phase will be the basis for their proposals for the detail design contract, which will be competitively awarded. The shipbuilder selected for the detail design contract will become the class design agent. The other shipbuilder will be awarded a design monitoring and producibility contract. Under this contract, the other shipbuilder will support both NAVSEA and the class design agent as well as ensure that working drawings produced during detail design are applicable to his own operation and facilities. This strategy will ensure both shipbuilders are equally competitive for lead and follow ship construction.

QUESTION: Is the contract design portion of the New Design SSN program fully budgeted to support a dual-contractor approach?

ANSWER: No, an additional $40 million is required to fully support a dual-contractor approach.

SUBACS

QUESTION: Your original SUBACS plan assumed that Fiscal Year 1986 SSN 688s would accommodate a product improved version called SUBACS A. Navy has rephased the installation plans to the Fiscal Year 1989 ships for SUBACS A. What is the revised cost estimate for each Fiscal Year 1986 ship for SUBACS BASIC compared to the budget plan?

ANSWER: The current estimate, as shown in the FY 86 President's Budget, reflects a requirement of $101.1 million per system for the SUBACS BASIC configuration.

QUESTION: Your current SUBACS plan also assumes that the follow-on SUBACS B product improvement -- which includes wide aperture array and long thin-line towed arrays -- will be availabe for Fiscal Year 1989 submarines, including the New Design SSN. In view of recent developments, how confident are you that the current schedule will hold?

ANSWER: The schedule to deliver SUBACS B with wide aperture arrays and long thin-line towed arrays for the Fiscal Year 1989 submarine is impacted favorably by the changes in the architecture for SUBACS BASIC.

QUESTION: With both SUBACS and SUBACS A slipping, how do you intend to work around engineering development of SUBACS B without increasing schedule risk, cost growth and concurrency?

ANSWER: SUBACS BASIC has experienced problems, which include the bus method of distribution, and was becoming a high risk program. The architecture has been modified to use a large Navy standard computer to control the distributed system. The original SUBACS B included a Large Wide Aperture Array (WAA) as the primary hull detection sonar for the SSN 21. The revised plan accomplishes the detection with a large spherical array which provides equivalent detection and increased coverage by the value of the array shape and location. A smaller WAA is still used for passive localization. These changes have reduced the schedule risk and have reduced the estimated cost to within the Five Year Defense Plan with a rescheduling of SUBACS A to merge with SUBACS B. The SUBACS B development and production concurrency will not increase.

LHD-1 AMPHIBIOUS SHIP MULTIYEAR

QUESTION: The request includes $1.5 billion for construction of the one LHD amphibious assault ship and advance funding for two additional ships in fiscal years 1988 and 1989 to be procured through a multiyear contract. Historically, shipbuilding programs have not been fertile ground for multiyear production efficiencies. Mr. Secretary, why are you convinced that the LHD program will be an exception?

ANSWER: The efficiencies that occur in production of ships awarded on a multiyear basis have shown to result in significant savings over the traditional annual procurement. Information from the CVN and LSD programs is showing the benefits, both in cost and schedule reductions, of multiyear/multiship procurement.

QUESTION: The multiyear justification material reveals that the government will incur $645 million more outlays over the first five years of the multiyear program than an annual procurement strategy. If the Congress proceeds under this plan, the government doesn't actually save anything until 1993, the eighth year. The projected $817 million savings won't occur until the end of the program in ten years. Given the current deficit projections, why should the Congress sign up to a plan which actually increases outlays over the next five years?

ANSWER: The concept behind multiyear acquisition is that to achieve significant program savings it is frequently necessary to expend more resources in the initial stages of design and construction, only to realize greater economies and efficiencies at a later date. The $817 million savings can only be realized by allowing the shipbuilder greater flexibility up front to design and start fabrication, for three ships in his most efficient manner. A greater outlay of funds initially will allow the shipbuilder this flexibility. In addition, these ships will deliver 33 months earlier than under an annual procurement profile.

QUESTION: The present value analysis for the program based on a discounted rate of 10 percent indicates the government will save $79.8 million by signing a multiyear shipbuilding contract. Mr. Secretary, this is a return on investment of barely 5 percent -- a 90 day CD at any bank is better than this with none of the risk. Why is this considered an acceptable multiyear candidate?

ANSWER: When you consider the 10 percent discount, the return comparable to the 90 day CD is 15.04 percent, significantly better than a 90 day CD and better than the government cost of funds. The purpose of the present value analysis is to assure that the Navy gets at least 10 percent savings.

QUESTION: Your plan assumes $250 million of the total savings will result from shipbuilder reductions in profit and manhours due to competition for a three ship buy. The Navy's experience with ship awards including option prices has been pretty good over the past few years. Why don't you think a competitive award under a traditional method wouldn't produce comparable savings?

ANSWER: The competition for three ships would achieve many of the same savings. Traditional methods would not be a three ship buy over 4 years, but rather competition for the FY 86 ship, and recompetition for the FY 88 ship with options for the FY 89 ship. This method has the disadvantage of reducing competition by restricting the base that the competitors would have to spread their start-up costs.

QUESTION: Another $146.1 million of the projected savings is expected from an 8 percent reduction in contractor furnished equipment costs based on an extrapolation from the fiscal year 1984 LSD amphibious landing ship program bid process. This is an interesting parallel -- didn't the LSD-44 contract bids come in with no discernable savings difference between multiyear or annual award with options?

ANSWER: The saving achieved on the LSD program because of the multiyear solicitation amounted to $435 million. The state of this shipbuilding industry tends to drive the bids together. The winning contractor is proceeding with his annually awarded program as if it were a multiyear. This could happen again on the LHD, in which case award would be made on the basis of an annual with two options if the savings achieved from the multiyear alternative were not sufficient to justify a multiyear award.

LSD AMPHIBIOUS LANDING SHIPS

QUESTION: CBO estimates a savings of $1.8 billion over the next five years if the Navy were to retain the four THOMASTON class LSD amphibious landing ships instead of retiring them. This could reduce the present construction rate of new LSD ships from 2 to 1 per year and save $200 million in fiscal year 1986. Mr. Secretary, doesn't this sound like a reasonable proposal?

ANSWER: We are already planning to retain two of our four remaining THOMASTON class LSDs over the next five years. While an arbitrary service life extension of the two other THOMASTON class ships would help in the immediate short term lift program, it does not solve the long term amphibious lift requirement. The Department of the Navy's "Long Term Amphibious Lift Requirement and Optimum Ship Mix Study" completed 25 May 1983 laid out a cost effective plan to meet the amphibious lift goal of a MAF(AE) and MAB(AE) by 1994. In this study, the need to retain the present retirement schedule for the THOMASTON class was reaffirmed because of the inadequate lift capacity, age and cost of maintenance of this class.

QUESTION: The THOMASTON class LSD ships would be about 25 years old at retirement if the Navy follows through with the current plan. Despite the age, CBO asserts that these ships would not be technologically obsolete compared to the new ships. Do you agree with this conclusion?

ANSWER: In clarification, the THOMASTON class LSD was planned for a 30 year service life. The current decommissioning schedule exceeds that service life for the remaining four ships an average of 2 years. Regarding the assertion that the THOMASTON class is not obsolete compared to the new LSD ships, I do not agree. In terms of lift capability, the WHIDBEY ISLAND represents an increase of 113% in square feet of vehicle cargo, 70% increase in cubic feet of bulk cargo, a two vice one helicopter capability and four LCACs versus a limitation to conventional landing craft only. To convert the THOMASTON class to lift LCAC would cost $4M per ship and result in only a three LCAC lift capability versus four. Additionally, the combat system of the THOMASTON class is out of date. The THOMASTON class SPS-6 air search radar is far inferior in terms of reliability, maintainability, range and detection performance compared to the WHIDBEY ISLAND class SPS-49. Also the THOMASTON class has neither an electronic warfare detection suite with passive defense system nor an anti-ship missile defense gun capability. The WHIDBEY ISLAND, on the other hand, is equipped with the SLQ-32, Super Rapid Blooming Offboard Chaff (SRBOC) system and two Close In Weapons System (CIWS) mounts. Equal in importance to technological enhancements when evaluating the THOMASTON class is readiness and reliability. As stated earlier, the THOMASTON class has exceeded its original design service life. Because of this advanced age and poor material condition, current maintenance efforts and associated costs have continued to increase while operational readiness has decreased significantly.

DDG 51/ DESTROYER PROGRAM

QUESTION: The 1986 request includes $164 million in advance procurement funding for 2 DDG-51 destroyers in fiscal year 1987. Of this amount, $75 million is requested for "production start-up costs" related to the AEGIS weapon system. Last year Congress specifically provided $83 million for start-up costs to bring in a second source for AEGIS weapon system production. Since start-up costs are only required once, why is the Navy requesting $75 million?

ANSWER: The FY 86 DDG 51 $75 million advance procurement request includes "production start-up" costs as well as long lead production items for FY 87 destroyers. Of this $75 million, $41 million in "start-up" funds are needed to expand production capacity from the single ship in 1985 to multi-ship buys anticipated in 1987 and beyond. This expansion provides augmentation to the Production Test Center, additional antenna testing facilities, AEGIS subsystem test facilities and tools and test equipment for expansion. $83 million was appropriated by Congress in FY 85 to second source the AEGIS Weapon System and not for "start-up" costs at the first source. This "second sourcing" investment will allow the Navy to qualify second sources to provide elements of the AEGIS Weapon System for both DDG 51 and CG 47 classes.

QUESTION: Similarly, $48.3 million is requested for initial start-up production of the SQS-53 sonar system. Aren't these costs normally covered as part of the lead ship expense? If so, why weren't the start-up costs included in the estimate for the DDG 51 funded last year?

ANSWER: First system start-up costs are normally part of the lead ship. However, the first SQS-53C sonar for DDG 51 is a preproduction model which has no production line start-up requirements. The initial SQS-53C production buy is scheduled for the FY 87 destroyers and included in the $48.3 million advance procurement request. This sum also includes necessary long lead items.

DDG 51 Engineering

QUESTION: The Navy has informed the subcommittee that it has decreased the FY 1986 R&D budget request for the DDG 51 by $11.8 million, to $89 million. How will this decrement affect the DDG 51 engineering development effort?

ANSWER: A briefing to a subcommittee staff member in April was in error. The FY 1986 budget is $101 million which fully supports Flight I.

Some $70 million of the remaining $89 million for the DDG 51 R&D program is earmarked for system engineering tasks (combat system, SPY-1D radar, ASW system, gunfire control system). The major engineering evaluation for the DDG 51 combat system will not start until February 1987, and the SPY-1D radar qualification tests do not begin until March 1987. Both of these events do not even start before you begin initial construction of the DDG 51 in 1986.

QUESTION: Why must so much engineering qualifications activity occur concurrently with initiation of ship construction?

ANSWER: Engineering evaluations of the SPY 1B/1D radar and the DDG 51 Combat System actually began as far back as 1981 and are only peaking in 1987. In fact, SPY 1D qualification tests began in 1984 with the antenna and signal processor. The basic combat system design is frozen and equipment procurements to support construction are underway. The Combat System evaluations in 1987 are primarily for computer program evaluation.

Such "concurrency" is true in almost all shipbuilding programs. The amount of concurrency accepted in the DDG 51 is small and was created intentionally to allow for the most up-to-date and thoroughly engineered program. This method was adapted from the tried and proven approach used to deliver TICONDEROGA, CG 47, and subsequent baselines of that Cruiser design.

BATTLESHIP REACTIVATION

QUESTION: $53.5 million is requested for advance procurement to support the planned fiscal year 1987 reactivation of the USS WISCONSIN -- the fourth and last of the IOWA Class battleships. We're told the request was pared back $45 million from the original estimate during the internal DOD review before the budget was submitted to Congress. Mr. Secretary, what fell out of the advance procurement package to arrive at the $53.3 million request?

ANSWER: The following is a comparison of the original Navy request of $98.5 million in Advance Procurement for the WISCONSIN to the current request of $53.3 million:

	ORIGINAL REQUEST	CURRENT REQUEST
Planning & Design	7.0	7.0
TOMAHAWK	21.2	11.7
SPS-49	5.7	3.5
HARPOON	5.2	3.1
Other Ord	2.1	.4
Communication Suite	7.8	4.0
Other Electronics	2.2	.9
I.C. Switchboards	2.0	2.1
HME	14.7	10.2
AN/SLQ-32	8.1	7.0
ILS & Tech Support	3.0	1.5
Gun Syst Repair Suppt	2.5	1.6
AN/SPS-67	.6	.5
CIWS	16.4	-
TOTAL	98.5	53.5

Many of the GFE items above were adjusted to minimal hardware requirements only. Diversions will also be utilized in some cases to support the ship delivery schedule.

BATTLESHIP REACTIVATION

QUESTION: Is it true the Navy plans to divert weapons and equipment from other shipbuilding programs to fill the advance material needs of the WISCONSIN?

ANSWER: The Navy does not desire to divert equipments/systems from any program to fill the needs of the WISCONSIN. However, based upon the officially approved schedule and the amount of funding provided in FY 86 some equipment diverson will be required due to the procurement/production lead time. The other programs involved in the diversion will receive units in sufficient time so that their ship delivery schedules will not be impacted.

QUESTION: GAO has learned that the Navy is planning to use the Close in Weapon System (CIWS) guns appropriated for the aircraft carriers and the SPS-49 radar from the cruiser program for installation on the WISCONSIN. If this is true, why is the Navy using material specifically appropriated for one program to cover the needs of WISCONSIN?

ANSWER: Diversions are only considered for any project when there is no reasonable alternative. Material is diverted from a ship where a payback can be made with little or no impact. In the case of CIWS and the SPS-49 radar, the Navy would change the shipping instructions for those units currently scheduled for delivery to other ships. A replacement unit will be delivered to those ships in time to meet their equipment delivery schedules with no adverse cost impact.

CRUISE MISSILE ARMORED BOX LAUNCHERS

QUESTION: The advance procurement request includes $11.7 million for cruise missile armored box launchers. We're told that the production line for these launchers is planned to close in January 1986, but the existing contracts do not include options for the WISCONSIN's launchers. Mr. Secretary, do you think an option can be obtained or is it the Navy's intention to reopen the production line exclusively for WISCONSIN?

ANSWER: An option for WISCONSIN's armored box launchers (ABL's) cannot be obtained from the current manufacturer under the current contract. It is our intention to award the fiscal year 1986 contract for WISCONSIN's ABL's on a competitive basis.

BATTLESHIP REACTIVATION

QUESTION: One of the Navy's primary reasons for reactivating the four battleships is to expand the number of platforms available for cruise missile capability. But, isn't it true that the battleships, collectively, represent less than 5 percent of total number of cruise missile launcher cells on order today?

ANSWER: If all Navy cruise missile assets are considered, then 5 percent is an accurate appraisal. The question obscures the unique benefits which the battleships provide in meeting the Navy's long range ASUW and strike requirements. Battleships represent eighty percent of the certified surface TOMAHAWK cells at sea today. As other TOMAHAWK ship classes come on line, this percentage will decline. When MISSOURI joins the TOMAHAWK fleet, battleships will still represent over a third of surface launch cells at sea. WISCONSIN will recommission with battleships representing twenty-five percent of surface cells. Not until 1995 will the battleship TOMAHAWK cell count represent only 5 percent of total cells.

QUESTION: Admiral Metcalf, the Navy is currently programming the personnel levels for the Battleships at 99 percent of the wartime requirement -- about 1,500 crew members. This compares to an average of about 90 percent for the rest of the surface fleet. If you're faced with a military personnel freeze, or a reduction below current levels, will you decrease the Battleship manning levels or spread the cut across the rest of the fleet?

ANSWER: Any reduction to Fleet manning would be spread across the entire Fleet, not just Battleships, in an attempt to minimize the immediate adverse effect on readiness. It must be emphasized, however, that any such reduction will have an unavoidable effect on Navy's warfighting capability. Historically, units have reported a 3% decrease in readiness for each 1% decline in manning. Thus, even a 1% mark against manning (roughly 3,000 end strength) would dramatically reduce Navy's ability to effectively support the demands of current National Strategy.

SHIPYARD WORKLOAD

QUESTION: Admiral Fowler, I understand the public shipyards will decrease their personnel by 5,557 between now and the end of 1985. Are these personnel reductions a result of the fewer overhauls to be performed in FY 1986? What other factors account for these reductions?

ANSWER: The purpose of reductions in Naval Shipyards' employment is to adjust the shipyard employment to a reduced workload, to reduce costs, and to improve productivity and efficiency. This will be accomplished without degrading the shipyards readiness for war or their ability to perform their technically demanding mission.

SHIP MAINTENANCE AND MODERNIZATION

QUESTION: The total ship maintenance and modernization program in FY 1986 is $6.1 billion. This represents a real decrease of $170.3 million from FY 1985. With a decrease of 37 percent in overhauls why is funding only down by 2.8 percent?

ANSWER: The Navy is increasing readiness by increasing the ships' operational availability. In order to do this, the number of regular overhauls are being decreased and various maintenance strategies are being pursued to lengthen operating cycles without subjecting ships to equipment failures which could jeopardize the ships mission readiness. Thus, while the number of overhauls are decreasing, the funding for ship maintenance and modernization is not reflecting major decreases.

The funding for ship maintenance and modernization reflects the growing trend away from ship overhauls and toward shorter, more frequent availabilities such as Selected Restricted Availabilities (SRAs) and Phased Maintenance Availabilities (PMAs). The FY 1986 budget shows a decrease in regular overhauls, from 55 to 35, and an increase in SRAs and PMAs, from 106 to 132. While the number of overhauls has decreased, the complexity of some exceeds that of overhauls or similar ships in previous years. For example, the work being accomplished on the USS EISENHOWER (CVN-69) is significantly more complex than the FY 1985 work on the USS KENNEDY (CV-67), increasing the cost by $45 million for alterations and $168.2 million for repairs. Modernization efforts include NATO Seasparrow, Navy Tactical Data System Upgrade, Survivability Improvements, Electromagnetic Pulse Hardening and the SLQ-17 in addition to the regular CV work package. Further, FY 1986 is the first year of full scale accomplishment of the Special Hull Treatment alterations for noise reduction in SSN 637 and 688 submarine classes. Nine installations are programmed at approximately $10 million each in FY 1986, in comparison to two installations in FY 1985.

The shift towards shorter availabilities results in increased readiness in that ships are no longer tied up in lengthy overhauls. Additionally, the Navy is increasing readiness by pursuing various maintenance strategies which will extend ships operating cycles. However, accomplishing shorter availabilities and extended operating cycles requires very careful attention to planning and engineering. Modernization and repair efforts must be carefully sequenced so that improvements implemented in one availability are not undone by those scheduled for the next. Additionally much greater attention is being paid to the maintenance requirements of equipment in ships with extended operating cycles so that failures will not jeopardize the ships ability to accomplish its mission. Increased funding is required to develop instrumentation and monitoring techniques to examine the stress on equipments and program them for appropriate maintenance.

Additionally, funds are required to support an increasing reliance in intermediate maintenance activities rather than the more extensive depot level maintenance. Increases are also associated with efforts to provide ships with spare parts which support new equipments being installed on ships and which better support old equipments. These spares allow ships' force to make minor repairs without having to replace equipments or send them to intermediate or depot level maintenance facilities.

SHIPYARD WORKLOAD

QUESTION: If overhauls are decreasing and your workforce is shrinking, why are the FMP installations increasing by $200 million?

ANSWER: There are five major contributors:

1. Although the number of overhauls decreases, the number of availabilities in which the FMP plays a part (COH, ROH, SRA, and PMA) increases from 149 in FY 85 to 154 in FY 86. The mix of availabilities also varies, with major net increases including the following: 2 additional CV SRAs, 7 additional submarine SRAs, 7 additional service force PMAs, and 8 additional amphibious ship PMAs. Some SRAs are comparable in size to an ROH.

2. USS EISENHOWER (CVN-69) COH is uniquely large and complex. In comparison to the only FY 85 CV COH (KENNEDY, CV 67), EISENHOWER's budget is $44.6 million larger. Reasons for higher cost:

   a. Package includes NATO Seasparrow, NTDS upgrade, survivability improvements, EMP hardening and SLQ-17, in addition to typical CV package.

   b. Private vs public (Newport News Shipbuilding had a high cost history on NIMITZ).

3. FY 86 is the first year of full scale accomplishment of the Special Hull Treatment (SHT) alterations in SSN 637 and 688 classes. Nine (9) installations are programmed at approximately $10 million each in FY 86, in comparison to two (2) installations in FY 85.

4. The Separate Funding portion of the FMP grows, particularly in three (3) areas:

   a. Nuclear Alterations: The $10.2 million increase is due to the EISENHOWER COH, an addition of one more SSN availability in FY 86, and an increase in the number of alterations available fleet wide.

   b. Machinery Alterations: The $10.6 million increase is to accelerate installation of Senior Navy Steering Board items of high fleet priority.

   c. Ordnance Alterations: The $10.4 million increase is due primarily to introduction in FY 86 of New Threat Upgrade (NTU) alterations in all Terrier and Tartar ships.

5. Two (2) large ship classes (FFG 7 and DD 963) enter a peak cycle in their improvement plans, at which point modernization outpaces maintenance/repair cost in availabilities. The FFG 7 begins to receive fin stabilizers, TACTAS and LAMPS/RAST as well as continuing to receive CIWS. The DD 963 ships begin to receive TOMAHAWK (VLS and ABL), LAMPS III, OUTBOARD, TACTAS and the all-electric auxiliaries, in addition to CIWS.

QUESTION: Mr. Secretary, last year the Committee directed the Navy to compete ship overhauls between public and private yards. Can you summarize your plans to meet this requirement?

ANSWER: The Naval Sea Systems Command has a plan with milestones for conducting the competition. The award of the first ship in the competition is expected August 1985.

The overhauls of USS DULUTH (LPD 6) and USS CLEVELAND (LPD 7) were selected for the competition based on their similar work packages and overhaul schedules.

NAVSEA has issued a coastwide competitive solicitation for the regular overhaul (ROH) of the USS DULUTH (LPD 6) on the West Coast. A fixed-price incentive contract will be awarded to the technically qualified offeror submitting the lowest price. If the award is made to the public sector, the CLEVELAND FY 86 ROH will be competed in the private sector; if the award is made to the private sector, the CLEVELAND will be assigned to a public shipyard.

A "winner" between the selected public and private yards will be declared only after evaluating final return cost data and assessing quality and other factors, for both overhauls. Proposal cost data will be adjusted for comparison purposes to account for unique and extraordinary cost elements in each sector, although both awards will be made using unmodified price proposals. An in-process evaluation during the overhauls will lend additional insight into the methods employed by the shipyards and should uncover reasons for differences in cost and quality between the sectors. The results will be reported to Congress.

STEAMING HOURS

QUESTION: Admiral Metcalf, the Secretary of the Navy has testified to this Committee that the Navy is steaming too much. What can be done to reduce steaming hours?

ANSWER: Navy efforts to lower OPTEMPO to a level that would support training and normal presence requirements have run into the reality of responding to national tasking. While expressing his concern for lower OPTEMPO, the Secretary of the Navy cited the example of USS NEW JERSEY which was scheduled for a 2.5 month shakedown deployment to the Western Pacific but ended in a 10.5 month deployment to the Eastern Mediterranean in support of multinational force operations. Because the Navy is tasked to respond to contingency situations around the world, the OPTEMPO is higher than that required for training and readiness. The FY 1986 budget request reflects no increase in the OPTEMPO above that approved in the FY 1985 DOD Appropriation. This level of effort request provides an OPTEMPO of 50.5 days/quarter for deployed operations which continues the national tasking to have a CVBG continuously deployed in the Indian Ocean. Termination of this national tasking would allow the Department of the Navy to reduce OPTEMPO to a level that would be consistent with training and normal presence requirements.

QUESTION: What would be the effect of a 5 or 10 percent reduction from your budget request?

ANSWER: Because of the continuing national tasking for Naval presence around the world, any reduction would have to be made at the expense of work up training in the nondeployed fleets. A 5 or 10 percent reduction would result in a 2.3 to 4.5 OPTEMPO day reduction bringing the nondeployed average from 29 to as low as 24.5 OPTEMPO days per quarter.

QUESTION: Average steaming hours remain constant in FY 1986 even though 11 ships have been added to the fleet. With increasing ships couldn't the average time steaming be decreased while still meeting your deployment requirements?

ANSWER: With decreased commitments around the world the Navy could reduce the average number of steaming hours per ship. A study of commitments, from JCS exercises to existing treaty requirements, is being made with the goal of reducing the number of ships deployed and the duration of deployments. If we are succesful in reducing our commitments and can reduce the number of ships that deploy we will gain the benefits of lower steaming hours deployed and fewer ships that have to complete the training cycle getting ready to deploy.

LEASING PROVISIONS

Question: Last year's appropriations act limited the maximum duration of a lease to 18 months unless a longer term program is specifically budgeted. The intent was to discourage the Defense Department from entering into lease or charter contracts without specific appropriations approvals. Since the Navy leases or charters nearly two-thirds of its transportation vessels, how has this provision been implemented?

Answer: All vessels chartered have been restricted to 18 months. This has resulted in higher costs and operational constraints.

Question: In each of the last four appropriations bills, this Committee has recommended reductions and advocated the closure of the Naval Material Command Headquarters. Last week the Secretary of the Navy announced the disestablishment of the Command headquarters. Mr. Secretary, would you explain to the Committee how the Navy acquisition commands will be restructured.

Answer: Disestablishment of the Naval Material Command (NAVMAT) will remove an entire layer from the acquisition management chain of command. A total of 450 positions will be eliminated along with one four-star billet. The five systems commands who previously reported to NAVMAT will now report directly to the Chief of Naval Operations (CNO) and for acquisition issues to the Secretary of the Navy. The current Naval Electronics Systems Command is being restructured to integrate naval force war fighting capabilities. The resulting organization will be renamed the Space and Warfare Systems Command and will integrate space systems, force ships and aircraft systems, and other service and allied systems. The four current systems acquisition commands which will remain essentially unchanged in program scope are: Naval Air Systems Command, Naval Sea Systems Command, Naval Supply Systems Command and Naval Facilities Engineering Command.

NEW THREAT UPGRADE

Mr. Secretary, the Senate Armed Services Committee has recommended not funding your $54 million budget request for the New Threat Upgrade. This program involves modernizing Tartar and Terrier ships with radar and automated fire control upgrades. These ships would then be compatible with the SM-2 Block II missile, giving them improved anti-air capability against cruise missiles launched by the Backfire bomber.

QUESTION: Can you do without the New Threat Upgrade on this class of ships?

ANSWER: No; we consider New Threat Upgrade (NTU) to be indispensable in providing critically needed near-term battle group ships capable of defeating air and cruise missile threats as the Navy transitions to Aegis-equipped TICONDEROGA class cruisers and ARLEIGH BURKE class destroyers. NTU is planned for 22 of our 31 Terrier ships and our 10 newest Tartar guided missile ships. The NTU system improves greatly surveillance and target tracking performance, particularly in chaff and jamming, and enables these ships to fire the advanced, long range, high altitude SM-2 Block II missile. The NTU/SM-2 Block II combat system allows us to engage [deleted] targets per fire control system at ranges two to three time greater than that of the SM-1 missile. For example, compared to SM-1, SM-2 Block II Tartar ship's maximum missile range increases [deleted] for Terrier ships, maximum range is increased [deleted] and maximum altitude is increased [deleted]. Of even greater consequence, our STANDARD surface-to-air missile procurement strategy since FY-83 for the SM-2 extended range version, and FY-84 for the SM-2 medium range version, has been predicated on modernizing these 32 ships to the NTU/SM-2 Block II configuration. If the NTU conversion program is halted, we will be faced with severe shortages of SM-1 (ER), SM-2 (ER) Block I, SM-1 (MR) and SM-2 (MR) Block I missiles, that are no longer in the production with the exception of the [deleted] SM-1 (MR). The RDT&E funds in our budget request involve two broad RDT&E tasks: (1) design, engineering development, computer programming, documentation and extensive testing to produce a baseline configuration, and, (2) adaptation, update, combat system integration and test of modifications to the baseline tactical, test and support computer programs with appropriate documentation changes to enable a production installation in SM-2 and NTU ships during overhaul. This is necessary to accommodate differences in ship class configurations, differences between ships within a class and to incorporate lessons learned from analyses of weapons system testing and actual missile firings. Comprehensive documentation also ensures that the installation can be operated and maintained by ship's force personnel following overhaul. The process for each SM-2 or NTU conversion starts typically two years prior to installation and finishes with final programming and documentation modifications about a year after overhaul completion. This requirement peaks in FY-87 due to the large number of NTU installations planned for FY-87 to FY-89. The NTU/SM-2 Block II combat system provides significant warfighting improvement at affordable cost and is essential for the conduct of sustained combat operations. I urge your strong support for this key tactical program.

QUESTION: Does the New Threat Upgrade extend the service life of these classes of ships.

ANSWER: Yes; we consider service life extensions to be implicit in the decision to install NTU.

QUESTION: Would you be more likely to retire these ships sooner, without the New Threat Upgrade?

ANSWER: Yes. [Deleted].

VERTICAL LAUNCH ASROC

The Vertical Launch System for CG-47s and DDG-51s will make surface combatants capable of firing three different weapons -- the Tomahawk cruise missile, the SM-2 surface-to-air-missile, and Vertical Launch ASROC against submarines.

While hardware development of VLS is essentially complete, additional engineering modifications -- many software related -- won't be completed until 1998.

QUESTION: Why is the Vertical Launch ASROC part of the VLS Program so far behind the Tomahawk and SM-2 integration efforts?

ANSWER: The Vertical Launch ASROC Program was started in March 1980 in response to a top level requirement to provide an anti-submarine warfare capability on ships with the Vertical Launching System which entered full scale development in FY-78. In October 1980 the Vertical Launch ASROC Program was discontinued and a combined Surface and Submarine ASW standoff weapon was pursued. In April 1982 the combined stand-off weapon program was reexamined. During this reexamination it was decided that the differing requirements for surface and submarine stand-off weapons required separate programs. In April 1982 the Vertical Launch ASROC Program was restarted with a requirement to meet as early an IOC as possible.

QUESTION: If either the VLS-ASROC integration effort slips, won't that put the Navy in the position of not having an ASW launching capability for VLS on some ships for a period of time?

ANSWER: VLS will be installed on 22 CG-47 class ships, 29 DDG-51 class ships and 24 DD 963 class ships. VLS will be forward-fit (during ship construction) on CG-47 and DDG-51 class ships. The VLS installation program is mature and in JAN 1985 the VLS magazines were installed on CG-52. VLS procurement rates are matched to CG-47 and DDG-51 class ship construction plans, and no problem is anticipated for the forward-fit ships. If ASROC (VLA) development or integration with VLS were to slip, a delay would be experienced on the three ship classes for a quick reaction, all weather, medium range ASW weapon. All three ship classes would still retain two additional methods of launching ASW weapons. For close-in ASW, they are all equipped with the MK 32 torpedo tubes, which provide an all weather quick reaction capability. For long range ASW all three ships are capable of operating and tactically employing LAMPS helicopters. The LAMPS helicopters will provide an ASW engagement capability in excess of the ASROC (VLA) range, and would meet medium range ASW weapon launching requirements if there is a delay in ASROC (VLA).

DD-963 class ships will receive VLS as a backfit during an overhaul period. In the backfit process the ASROC launcher is replaced by the VLS launcher. The ASROC launcher would not be removed if a VLS was not available.

QUESTION: Is there currently sufficient VLS business to justify the second source?

ANSWER: Yes. A total of 75 ships will be equipped with VLS. This represents a total launcher requirement requirement for 126 VLS magazines, of which 29 have been procured thus far (including FY-85 procurements).

NATO REPLACEMENT FRIGATE FOR THE 1990s (NFR-90)

QUESTION: What is the current status of the NATO frigate program? What success has been obtained in gaining NATO agreement on a common frigate design?

ANSWER: The NATO Frigate Replacement for the 1990s (NFR-90) program is well into the Feasibility Study Phase. The objective of this study is to apprise the eight participating nations (Canada, France, Germany, Italy, Netherlands, Spain, U.K. and U.S.) of the feasibility of having one ship design satisfy all the nations' requirements. The study is being conducted by the International Ship Study Company (ISS), a limited partnership consortium incorporated in Hamburg, Germany. Germany is acting as host nation for this phase of the project. The consortium consists of a firm from each of the eight participating nations. The Westinghouse Electric Corporation has a contract with the Naval Sea Systems Command to represent the United States in this effort. The Feasibility Study will be delivered to the participating nations in late October, 1985. A period of about six to nine months will be required for each nation to review the study, decide whether building such a ship is in its interests and then make a decision on whether to proceed into the Project Definition Phase or leave the project. The nations agree that in general, the study to date appears to be meeting the NATO Staff Target, the document wherein the nations laid out their requirements for a frigate. The Feasibility Study will contain the proposal for a frigate design. Each nation is awaiting evaluation of the Feasibility Study before deciding whether to continue in this project.

MCM MINE COUNTERMEASURES SHIPS

QUESTION: The Navy requests $334.1 million to build four MCM minesweepers. The performance history for the first nine ships of the class has been trouble plagued -- the first five ships are now planned for delivery four to seven months late, the engines and reduction gears are incompatible, and the major ship systems haven't completed the development stage as yet. Mr. Secretary, wouldn't it be prudent to put the program on hold for a year until the problems have been ironed out?

ANSWER: The Navy is critically short of mine warfare ships and considers it essential to continue to build mine countermeasures ships. There have been problems with the MCM program. Plans to solve these problems have been made and are being implemented. We have also made significant changes in management. These new personnel and intensified program management will bring the program back in course.

QUESTION: Admiral Metcalf, there is a school of thought which argues for the Navy and Marine Corps H-53 minesweeping helicopters to substitute for the MCM mission. What are your views on the issue?

ANSWER: With respect to MCM mission requirements, [deleted] [deleted]. Priorities are established by Fleet CINCS on the order in which ports should be sequentially cleared. Minesweeping helicopters are the U.S. Navy's air transportable, quick reaction capability for dealing with mining incidents [deleted]

[deleted]. Unlike surface MCM forces, [deleted]. [deleted] Additionally, the MCM helicopters' [deleted]. The Navy cannot rely exclusively on helicopters to perform all MCM missions.

QUESTION: Would it be more cost effective to proceed with more minesweeping helicopters and curtail plans for more MCM ships?

ANSWER: The required mix of mine countermeasures ships and helicopters is being again reviewed in an update to the MCM 85-90 study, which initially established the numbers of ships needed. However, it is anticipated that no less than 14 MCM-1 class and 17 MSH-1 class ships will be necessary to counter the mine threat.

AIRCRAFT CARRIER SERVICE LIFE EXTENSION

QUESTION: The request includes $133.4 million for advance material to support the fiscal year 1987 service life extension of the KITTY HAWK. Last year Congress cut $50 million due to the Navy's reevaluation of the shipyard work package from 28 to 18 months. Now the plan is back to 28 months. Why has the work package planning been so fluid?

ANSWER: Reduction in the Navy budget submission for CV SLEP in FY 86 reflected a prospective reduction in the planned scope of SLEP for KITTY HAWK and CONSTELLATION, pending review of the material condition of the ships, and determination of precise repair requirements. Based on review of both anticipated repair and modernization requirements, KITTY HAWK and CONSTELLATION budgets were revised to approximately 80% of earlier estimates. Various durations have been considered by the Navy with the objective of determining the most cost effective time period, keyed to the specific needs of each ship.

QUESTION: Is there any consideration of an 18 month work package and if so, what is the fiscal year 1986 budget impact?

ANSWER: Extensive review of minimum work packages has resulted in a Navy decision that the shortest feasible duration is approximately 24 months to accommodate critical path flight deck and main machinery space repair work. Further reviews are continuing to explore the possibility that a longer industrial period may provide opportunity to reduce off-shift and overtime requirements and thereby yield additional efficiencies and cost effectiveness. None of these contemplated adjustments would change the fiscal year 1986 budget requirements.

NEW DESIGN SSN

QUESTION: What plans do you have in the outyears for improved 688s? When will production cease?

ANSWER: The Navy will continue to add improvements to the SSN 688 Class as they become available and are in the SCN budget. Production is scheduled to end with completion of the last ship estimated to be a Fiscal Year 1992 authorization.

SSN-21

Question: If SALT constraints force you to phase out POSEIDON SSBNs, would they be converted to cruise missile carrying attack submarines?

Answer: No. The alternative of converting POSEIDON SSBNs to cruise missile carrying attack submarines has been reviewed. These are old submarines, ranging in age from 18 to 22 years. They have limited potential for increased combat capability. Commitment of significant resources of funds and shipyard capability would be required just to make necessary modifications to weapons launch and fire control systems for cruise missiles.

Our attack submarine modernization programs do incorporate cruise missile (TOMAHAWK) capability into our front line submarines during new construction and overhaul. These more capable submarines provide a cost-effective cruise missile capability.

Question: Just what options are available for retaining the POSEIDONs in the fleet?

Answer: The POSEIDON SSBNs could remain effectively employed in a strategic role. There is no viable role for them as attack submarines. Their limited combat capability and potential for upgrade precludes them from having an attack submarine role in the U.S. Maritime Strategy. Use in some very limited mission is technically possible but unwise. Diversion of resources for attempted upgrading or modification of our older ships would seriously impact the modernization of the attack submarine force and maintenance of a capable 100 SSN force.

ADVANCED SUBMARINE TECHNOLOGY

Last year the Authorization Conference earmarked $30 million from the Navy RDT&E for Advanced Submarine Technology. The Appropriations Committees, at the request of the Navy, did not add these unbudgeted funds to the Defense Appropriation Bill.

QUESTION: What is the status of that $30 million authorization? Do you intend to respond to the Authorization Conference Language by reprogramming funds into these projects (such as titanium hulls and HY-130 steel)?

ANSWER: The language of the 1985 Defense Authorization Act specified that the Navy use $30 million of FY 1985 research and development funds to advance the state of submarine technology. Allocations by the Navy for technologies meeting the intent of the Authorization Bill language total about $50 million for FY 1985. There is no plan to reprogram additional funds into these projects.

The Authorization Conference also restricted Navy obligation and expenditure of funds for the New Design SSN until the Secretary of the Navy "provides written certification" to Congress that, based on the current National Intelligence Estimates approved by the DCI, the new design attack submarine will be capable under operational conditions of engaging the known Soviet submarine threat.

QUESTION: How long has this legislative restriction hampered the New Design program? Do you seek relief from this restriction in the FY 1986 bill?

ANSWER: The Secretary of the Navy provided written certification to Congress in December 1984 that SSN 21 will be capable of engaging the known Soviet submarine threat. This certification was provided to the Chairmen of the Armed Services Committees and of the Appropriations Subcommittees on Defense. The legislative restriction is no longer in effect and, therefore, further relief from the restriction is not applicable.

New Design Hull

QUESTION: Do you have a follow-on plan to use HY-130 steel for the New Design hull, so that it can accommodate deeper depths?

ANSWER: SSN 21 is being designed so that the pressure hull structure can be constructed with either HY-100 or HY-130 without modification of the ship design. When constructed with HY-100, SSN 21 will have a test depth [deleted] when HY-130 is used.

NEW THREAT UPGRADE (NTU)

QUESTION: Is the current combat systems technology for these classes of ships based on 1960s technology?

ANSWER: Partially, the New Threat Upgrade Combat System is an evolutionary growth from the first TERRIER and TARTAR analog weapon systems introduced into the fleet in the late 1950s, early 1960s. Phased upgrades to these systems and the missile have kept pace with the evolving threat.

Improvements to the TERRIER and TARTAR baseline systems include introduction of the Standard Missile 1 in the early 1970s and the CG/SM 2 combat system in the early 1980s. CG/SM 2 technology improved fire power and missile range capability.

The NTU Combat System improvements were required to meet the threat generated by smaller, faster and higher missiles in the presence of severe electronic countermeasures. Synergistically interfacing between subsystems, NTU takes advantage of sophisticated target processing in advanced computer suites. The NTU design maximizes capability with major technology changes to the detection (SPS 48E, SPS 49(V)5, SYS 2) and command and control (UYK 43 based computer configuration) systems based on advanced techniques.

Performance modifications to the engagement systems were achieved within existing equipments by removing older analog circuitry. The MK 152 Fire Control Computer designed in the late 1960s and first introduced in 1974, is the only remaining component of the NTU engagement system that is based on 1960s technology.

DDG 51 ENGINEERING

QUESTION: We started DDG 51 development back in 1981. Why do we still have so much engineering development left on the program (FY 1987 projection is also $89 million)?

ANSWER: Our experience with Ticonderoga indicates that it takes 7 to 8 years to engineer the lead combat system for a major combatant like DDG-51. In the case of ARLEIGH BURKE, much of the first year to a year and a half were spent defining to what degree the combat system would be derived from the combat system in Ticonderoga. In 1982, the decision was made to switch over to UYK-43 computers and in 1984, a full combat system development contract was signed with RCA. From 1987 to 1989 the combat system will be in the final stages of computer program development and evaluation. In 1987, some of the $89 million will be used to fund this activity. One third of the $89 million will be used to develop the Anti-Submarine-Warfare combat system. MK-116 Mod 7, the Gunfire Control System, and the AN/SPY-1D Radar. In Ticonderoga, development costs for similar combat system elements as these were funded in separate line items.

DDG 2/DDG 37

QUESTION: Some 29 DDG 2s and DDG 37s are scheduled for retirement between 1989 and 1994. We understand that the Naval Sea Systems Command is looking at extending the life of some cruisers and the DDG 37s.

Just what are you contemplating with the service life extension program for cruisers and destroyers?

ANSWER: We have no plans for a Service Life Extension Program (SLEP) for cruisers and destroyers. Although we have evaluated the feasibility and cost effectiveness of longer service lives for DDG 2 and DDG 37 class ships, these proposals were not adopted. Our current plan is to retire most ships of these classes at the end of their design life, projected to be attained between 1989 and 1994, except for three DDG 2s and one DDG 37 which received significant combat systems upgrades and will be retained about five years longer than their sister ships. The material condition and warfighting improvements planned for our cruisers may also permit us to keep them in active service beyond a nominal 30-year service life.

SUBACS

QUESTION: Wouldn't it be better to defer the fourth SSN-688 this year, so that it can be equipped with SUBACS A, rather that keep it in the FY 1986 budget and have it outfitted with basic SUBACS?

ANSWER: No. Each new SSN adds much needed warfighting capability into our attack submarine force, acting as a force multiplier. Our newest, most capable SSNs are given the toughest warplan assignments. Therefore, we need the force enrichment achievable with the current building plan. This will maintain a capable, 100 SSN force best equipped to execute our maritime strategy.

SUBACS BASIC is the combat system for SSN-688 ships in FY 1983 through FY 1988. The Navy plans to combine the A and B versions in the FY 1989 ships.

SSN CONTRACT DESIGN

QUESTION: The Navy R&D program includes $65.4 million for Ship Contract Design. Of this amount, $20 million is for SSN 21 ship contract design. Will this amount fully support your program to carry two shipbuilders through a competitive contract design program?

ANSWER: Additional $40 million is required to fully support a dual-contractor approach. In order to conduct a competitive contract design at two shipbuilders a total of $71 million will be required. $11 million will be required in FY 85 and $60 million will be required in FY 86. The additional $40 million is required to support the second contractor and for the additional NAVSEA design monitoring, integration and review required with two contractors.

FY 1990 CARRIER

QUESTION: Your ship contract design program would commence pre-availability planning and design of the FY 1990 nuclear carrier, CV-74. Can't we defer this initial planning until next year?

ANSWER: No funds are budgeted for CVN 74 planning and design under the ship contract design program. As reported in Ship Subsystem Development/Land Based Test Sites Program Element Descriptive Summary, efforts continue on the development of High Strength Low Alloy (HSLA) steel weldments and the assessment of impacts of the Collective Protection System (CPS) for use with future CVN ship designs.

NATO REPLACEMENT FRIGATE FOR THE 1990s (NFR-90)

QUESTION: What are the preliminary design features of the NATO frigate?

ANSWER: The Feasibility Study for the NATO Frigate Replacement for the 1990s (NFR-90) is still underway in Hamburg, Germany. "Feasibility Study" is the third of seven phases in the NATO Periodic Armaments Planning System (PAPS) and approximates the Preliminary Design Phase in the United States' acquisition process. Until the Feasibility Study is delivered in late October, 1985, the preliminary design features will not be available.

QUESTION: How will NATO frigate size up in terms of cost and capability to our FFG 7 class frigates?

ANSWER: The information needed to answer this question is not yet available. The Feasibility Study will make an estimate of the cost of the ship which the International Ship Study Company (ISS) recommends as the best alternative to meeting the NATO Staff Target, the document which lays out the specifications desired by the participating nations. Until the Feasibility Study is received and evaluated by the Naval Sea Systems Command and the Office of the Chief of Naval Operations, no information on potential cost and capability will be available. The Feasibility Study is scheduled to be delivered to the nations by the ISS in late October, 1985. A period of six to nine months will be required to evaluate the study. All eight participating nations (Canada, France, Germany, Italy, Netherlands, Spain, UK and U.S.) have a strong desire to see the NATO frigate be a ship capable of meeting the threat of the 1990s while minimizing cost.

TRIDENT SYSTEM SUPPORT

QUESTION: What caused such a sharp decrease in Trident System Support from the estimate for FY 1984 to the actual cost?

ANSWER: The sharp decrease in Trident System Support is due primarily to two actions. The disestablishment of the Trident Systems Project Office (PM-2) resulted in the distribution of the budget between Naval Sea Systems Command (NAVSEA) and the

Strategic Systems Program Office (SSPO). NAVSEA retained maintenance support functions, while the acquisition support functions (approximately $63.1 million) for the D-5 missile system where transferred to SSPO. Additional reductions (approximately $15 million) stem largely from Congressional initiatives to reduce both general program and contract support service growth.

QUESTION: What effect does this decrease have on the FY 1985 and FY 1986 requirements?

ANSWER: The bulk of the reductions were functional transfers which have no programmatic effect on FY 85 and FY 86 requirements. The reductions due to growth deferred expansion of the Trident Intermediate level Maintenance Program from FY 1984 to FY 1985 and FY 1986. The two chief areas affected were the Command and Control System (CCS) program Resolution and Analysis effort and the refurbishment of TRIPER/Non-TRIPER components. Providing for both of these initiatives in FY 1985 and FY 1986 will result in increasing the backlog of lower priority CCS problem reports and the deferral of lower priority component stocks.

FBM SUPPORT

QUESTION: Please explain the decrease in repair parts requested in the FY 85 budget to the current estimate.

ANSWER: The total decrease in repair parts funding between the FY 1985 budget request and the current estimate is $2.6 million. Of this decrease, $1.2 million was the change in the inflation ratio for purchases from the Navy stock fund. The remaining $1.4 million reduction was directed by Navy as a result of internal audit findings.

QUESTION: What is causing the increase in nuclear ship inventory and years support? Why are nuclear steaming hours decreasing?

ANSWER: The TRIDENT building program is causing the increase in ship inventory and ship years supported. The small decrease (less than 1 percent) in steaming hours in FY85 is not statistically significant and does not reflect a conceptual change in operations.

QUESTION: Last year the estimate for FY 84 steaming hours was 166,423 hours. The actual reported in this budget was 136,612. How do you explain such a large change?

ANSWER: The reduction in steaming hours in FY 84 was due to:

a. 10 months of lost ship operations due to late completion of SSBN overhauls.

b. 7 months of lost ship operations due to an SSBN main engine casualty prior to overhaul start.

[Deleted].

QUESTION: While steaming hours actually decreased, your estimate to actual change for military personnel endstrength was 16,780 to 17,085. What is the explanation and justification for this increase?

ANSWER: The steaming hour reduction is associated with SSBN operations. The manpower increase is associated with increased maintenance taskings on submarine tenders in support of the submarine extended operating cycle. Steaming hours and tender maintenance taskings are not directly interdependent.

QUESTION: What is the reason for additional increases in FY-86? (military endstrength)

ANSWER: Manpower increases in FY-86 reflect growth at the submarine base at Kings Bay, Georgia, in support of the TRIDENT II (D-5) IOC and small increases on each submarine tender.

TRIDENT PROGRAM GROWTH

QUESTION: What are the costs associated with deployment of the SSBN 731 and 732 in FY 86? How many months are covered for each of these submarines?

ANSWER: The following data is provided:

	No. Months Operational IN FY 86	Anticipated Operational Expenses
SSBN 731	12	1.6M
SSBN 732	9	.9M
		2.5M

Estimate does not include crew pay or Intermediate Maintenance Activity (IMA) support.

FBM Maintenance

QUESTION: The FY 84 estimate of ship years (RATA) was $12.4 million. The actual cost was $24.4 million. Please explain this large adjustment.

ANSWER: The majority of the increase ($10 million) due to emergent repairs for two sections of the six section AFDB 7 dry dock at HOLY LOCH. The dry dock lost its safety certification and structural repairs had to be immediately undertaken.

QUESTION: Service Craft RATA in FY 84 was $1.2 million. What is causing the large growth in FY 85 and FY 86? Please discuss any price growth from FY 85 to 86.

ANSWER: There were no service craft scheduled depot maintenance due in FY 84. However, 5 craft are due in FY 85 and 6 are due in FY 86. The FY 86 figure also includes additional scheduled work on AFDB-7 which is more complex than the craft overhauled in FY 85.

QUESTION: Please explain the change in outfitting requirements for FY 84 from last year's estimate.

ANSWER: The outfitting program increased by $19 million as a result of major increases in special program requirements ($52 million) and in spares requirements for the SLQ-32 Countermeasure System ($18 million), offset by decreases in requirements associated with ship availabilities (-$4 million), major equipment spares (-$21 million), and between overhaul changes (-$26 million). The increases were for programs such as Training (CNET) Outfitting, Special Warfare Group Outfittings, AN/WLR-9A Sensitivity Mod Upgrade, Individual Combat Equipment, and Advance Readiness Force establishment.

NIGHT VISION DEVICES

QUESTION: The FY 1985 budget showed zero funds for Night Vision Devices in FY 1985. The current estimate for FY 1985 is $205,000 with an additional $266,000 in FY 1986. Please explain these changes and increases.

ANSWER: The BA-1 Outfitting program had budgeted requirements of $12.58 million at the time of the FY 1985 Congressional budget submission. The Night Vision Devices program was one of several programs that received funding when programmatic increases and emergent initiatives raised the BA-1 outfitting requirements to $20.422 million for the FY 1986 congressional submission. Requirements are determined by the shortfall in the allowance for Night Vision Devices at the time of the Coordinated Shipboard Allowance List (COSAL) requisition is filled. The increase from FY 1985 is due to the expected deficiency in the COSAL at the time of overhaul.

FBM MAINTENANCE

QUESTION: What is included as cost in the FMP program support category? What is the cause of the $5 million increase?

ANSWER: FMP program support consists primarily of Design Service Allocation (DSA) and to a lesser extent weight and moment and alterations testing.

The following contribute to the $5 million increase in FY85:

a. planning initiated in FY85 for alterations in the FY 87 overhaul program

b. increased requirements assigned to the design yards to resolve emergent alterations installation problems.

QUESTION: In the FY84 request, FMP mission funds were $29.5M. The actual reported cost was $60.4 million. Can you explain what adjustments were made and why?

ANSWER: The increase in FY84 FMP mission funds in the FY85 budget submission is primarily due to a change in how Nuclear Alterations and Service Craft Improvement Program expenditures are reported. These items, which were reported under the Hull, Mechanical, and Electrical (HM&E) category in FY84 are now reported under FMP mission funds. A corresponding decrease can be seen in the HM&E line since the FY84 budget request.

COMMAND AND STAFF

QUESTION: Please explain the reduction of 37,000 (38%) per diem days between the FY 85 request and the current estimate.

ANSWER: The reduction of 37,000 per diem days from the FY-85 request to the FY-85 current estimate is the result of the application of the "Tripartite Offset" and various other Congressional reductions to Fleet TAD. In addition, the FY-85 current estimate was adjusted based on Fiscal Year 1984 actual execution and projected FY 1985 MAC channel requirements for crew rotations and mission essential training. The FY-85 current estimate represents an executable program.

MAINTENANCE OF REAL PROPERTY

QUESTION: Why is the requirement for personnel increasing when workload and funding are decreasing?

ANSWER: Workload and funding related to functions performed by in-house civilian personnel is not decreasing. The major contributing factors for decreased funding in the budget is rephasing of maintenance schedules for dredging at SUBASE Kings Bay, Georgia and reduction in minor construction projects and rephasing of maintenance on utility systems, ground structures, portal cranes, and the marginal wharf at SUBASE Bangor, Washington and Kings Bay, Georgia. These efforts result in a significant reduction in funding but not civilian personnel because the work is performed by contract. The budget also includes major expansion efforts to support Submarine Squadron Sixteen and the development of a TRIDENT facility at SUBASE Kings Bay, Georgia. There is an increase of over 2.3 million square foot of additional building space identified in the performance criteria section of the budget request that will be added between FY 1984 and FY 1986. A portion of the increased workload, associated with the newly constructed facilities becoming operational, will be accomplished with the increased civilian personnel requested in the budget.

QUESTION: Your estimate for civilian end-strength in FY 1984 included in the FY 1985 budget was 96. The actual end-strength was 69. Please explain this change. What factors necessitate increases in FY 1985 and FY 1986?

ANSWER: There are two reasons why FY 1984 civilian end-strength changed between what was identified in the FY 1985 request and what actually occurred. One change involves 11 positions for expansion efforts occurring at the Kings Bay, Georgia TRIDENT facility. When plans were originally developed it was assumed that there was an adequate labor force of qualified people available for hire in the area surrounding the facility. As it turned out this was not the case and hiring efforts had to be redirected. This has caused a slight delay in obtaining qualified people, but the problem has been corrected and all the positions that where originally planned for FY 1984 are now being hired and will be in place by the end of the year.

The other change involves a management study of functions at SUBASE Bangor, Washington. The study resulted in a decrease of 16 end-strength from the direct fund budget for positions that were providing maintenance support to tenant activities on a reimbursable basis. This action corrects the budget classification of the 16 positions, thereby matching personnel positions to funded workload.

FY 1985 and FY 1986 increase because of the major expansion efforts to support the Submarine Squadron Sixteen and the development of the TRIDENT facility at SUBASE Kings Bay, Georgia, which add over 2.3 million square foot of building space, some of which will be maintained by an in-house maintenance staff.

BASE OPERATIONS

QUESTION: Please explain the scope of work accomplished in the category ownership operations and the increases in FY 86?

ANSWER: Base Operations - Ownership is defined as that support required at shore bases regardless of type of mission being performed which must be sustained to have a functioning base. Expenses are included for the following functions:

- Other Engineering Support - Public Works Department Administration, engineering services, custodial services, refuse/garbage collection and disposal, snow removal, rental and leasing of real property, and fire protection and firefighting for Naval activities and their tenants.
- Administration - provides support related to financial/resource management, civilian manpower management, and maintaining military personnel records.
- Automated Data Processing - provides analysis, programming, equipment rental, operations and maintenance, contractual services and supplies.
- Hazardous Waste Material Handling - includes personnel, supplies and training associates with the identification and disposal of hazardous wastes.
- Audiovisual - provides supplies and services required for audiovisual support.

The increases in FY 86 budget result from price adjustments and services to support increased facilities and medical support at Subase Kings Bay, Georgia. Also included is funding for a Base Services Support Contract for additional 100,400 SF of building space at Kings Bay.

QUESTION: The military end strength in the FY 85 request was 275. The current (FY 85) estimate is 529. Please explain this change and discuss additional military and civilian personnel requirements for FY 86?

ANSWER: The 254 end strength in question represents a functional re-identification of existing manpower rather than actual growth in the program. Subsequent to submission of the FY 85 request, Navy reclassified 254 end strength at Subase Bangor from Trident Mission Support to Base operations in an attempt to more accurately display the functional allocation of our strategic manpower resources. Minimal additional manpower resources have been programmed in FY 86 at Subase Kings Bay for support of the growing Trident II program. The requested increase of 73 military end strength will provide necessary Medical, Bachelor Housing, and facilities operation and maintenance support.

POSEIDON Inactivation

QUESTION: Has the Navy decided whether it will deactivate a POSEIDON submarine in conjunction with the commissioning of the USS ALASKA?

ANSWER: President Reagan decided to dismantle a POSEIDON submarine in conjunction with USS ALASKA entering the fleet.

QUESTION: What funding is included in the budget for ship operations of the POSEIDON submarine? Is funding included for inactivation? How much?

ANSWER: The POSEIDON SSBN designated for possible dismantlement at the time of ALASKA's sea trials is funded for overhaul in April 1986. Funding is included to operate her until overhaul start. If this SSBN is not overhauled, another submarine is planned to move into its industrial availability. $16M is required if a POSEIDON is dismantled.

QUESTION: What are the estimated costs of operations for the new TRIDENT in FY 86? Are these included in the FY 86 budget request?

ANSWER: USS ALASKA (SSBN 732) will deliver in December 1985 or January 1986. Operating expenses in FY 86 are estimated to be $900K and are funded in the FY 86 budget request. Estimate does not include crew pay or Intermediate Maintenance Activity (IMA) support.

SHIP OPERATIONS

QUESTION: Last year the Navy estimated a requirement for 25,432 thousand barrels of fuel for FY 84. Actual usage was 24,915 thousand. The request for FY 85 was 24,867 thousand and the estimate currently is 23,821 thousand. Can you explain why fuel usage decreased when ship inventory remained relatively constant?

ANSWER: Fuel useage is dependent on ship inventory and mix. For example, due to carrier maintenance scheduling there are ten additional nuclear powered carrier operational months in FY 85 while the total carrier operating months remains level. The result is a requirement for less fuel in FY 1985 while the inventory remains relatively constant.

QUESTION: What savings in fuel and other activities could be achieved by lowering conventional steaming hours in FY 86 to the FY 85 current estimate?

ANSWER: Costing maintaining the FY 86 program at the 847 thousand steaming hours in the FY 85 program is not meaningful due the significant difference in cost per hour between ship types. For example, a CV may use 160 barrels per hour while a FFG may use 14. Averaging the fuel usage per hour by ship type does not provide a meaningful figure to derive a cost per hour.

QUESTION: What costs are included in the performance criteria for fuel? Can you break out the costs?

ANSWER: Only the number of barrels used in ship operations are included in the performance criteria. The barrels multiplied by the stabilized cost per barrel for the appropriate fiscal year will equal the fuel cost. For example, in Fiscal Year 1985 the cost of fuel is $39.90 per barrel or $950,440 for 23,821 thousand barrels.

SHIP OPERATIONS - ANNUALIZATION COSTS

QUESTION: Please provide details on the annualization costs associated with the 17 new ship deliveries and 2 reactivations from FY 85.

ANSWER: Due to new construction delivery schedules, ships enter the inventory at various times during the year. The budget for each year requests operating funds for the number of months remaining in the fiscal year. The annualization of these prior year force changes recognizes that the ships must operate for a full year in the next budget year. For example, the USS HAWES (FFG-53), was commissioned in Feb 1985 and the FY 1985 budget contained funds to operate the ship for seven months. In the FY 1986 budget the additional five months of operating costs are requested as annualization costs.

QUESTION: Show the month of delivery and costs associated with deliveries of newly constructed and reactivated ships planned in FY 1986.

ANSWER: The month of delivery and cost to operate the ships for the remainder of FY 1986 are as follows:

SHIP	MONTH	COST ($ million)
ARS 53	FEB 86	.5
BB 63	APR 86	4.0
CG 50/52	JAN 86/SEP 86	5.4
FFG 57/58	JAN 86/NOV 85	5.1
LSD 42	NOV 85	3.1
MCM 1/2	FEB 86/AUG 86	.6
MCM 3/4	JUN 86/JUL 86	.2
SSN 720/721/722	NOV 85/MAR 86/SEP 86	1.7

SHIP OPERATIONS

QUESTION: Ship inventory is only increasing by three in FY 86; why is personnel increasing by 8,146? Please provide a list which shows where personnel changes will occur.

ANSWER: There is a net change of 4 ships (including 1 Battleship reactivation) in FY 86. Manpower changes in ship operations may be grouped under three primary categories, crews for the 14 new vessels entering the fleet in FY 86, precommissioning crews for 14 vessels entering the fleet in FY 87/88, and enhanced manning of existing units in support of maintenance programs or weapons systems. In addition to manpower required for the new vessels, the requirement for precommissioning crews and support for new maintenance programs and weapons systems more than offsets the savings realized from the decommissioning and transfer to reserves of 10 ships. The table below details the changes:

Manpower Required For Ships Commissioning in FY 86 SSN (3), FFG (2), CG (2), ARS (1), LSD (1) BB (1), MCM (4)	+2,275
Manpower Required For Precommissioning Crews CG (4), CVN (1), FFG (2), MCM (1), SSN (6)	+3,488
Other Manpower Requirements	+2,383
CV/CVN (Partial crew restoral to CV-62 prior to completion of SLEP.)	+899
CG/CGN (CGN crew manning improvement.)	+155
DD/DDG (Fleet Modernization Plan - Manpower to support backfitting of combat weapons systems including Tomahawk, CIWS, SLQ-32, Lamps Mk III, Classic Outboard.)	+376

FF/FFG	(Transfers to NRF.)	-538
AD.	(Required to support Phased Maintenance Program calling for increased Intermediate level instead of depot level ship maintenance, and Minimum Manned Ships program which places greater stress on AD maintenance and repair capabilities, avoiding the need for duplicative organic assets for each vessel supported (ex. FFG-7).)	+1,157
SS/SSN	(Net change from decommissionings, crew augmentation for submarines entering overhaul, and an increase in requirements of +2 end strength per submarine.)	+64
AS/ARDM	(Manpower to 8 tenders for additional maintenance required due to increased optempo and extended operational cycles of attack submarines.)	+331
Amphibious Assault Ships	(Enhance manning of 9 LSTs following addition of new berthing.)	+100
BBs, Patrol Combatants, and Replenishment Ships		+48
AR	(Manpower required to support Phased Maintenance Program calling for Intermediate level instead of depot level maintenance.)	+179
ARS/T-ATF/ATS	(Transfer of 3 ARSs to NRF.)	-411
Cryptologic and Subsurface Fleet Support		+23

QUESTION: Please explain the changes From FY-85 to FY-86 regarding charter tanker support for CVBGs.

ANSWER: Adjustments to chartered tanker support of CVBGs relfect the reduction of tanker support requirements for the CVBGs in the Indian Ocean in FY-86.

SHIP MAINTENANCE AND MODERNIZATION

QUESTION: Please explain the cost adjustments from FY 1985 request to the current estimate for ship overhauls.

ANSWER: The difference between the FY 1985 request of $2,810.4 million for active fleet overhauls and the current FY 1985 estimate of $2,775.6 million is -$34.8 million. This is a net number comprised of Congressional adjustments of -$72.5 million and Navy adjustments of +$37.7 million. The Navy adjustments, for the most part, are related to revised requirements for submarine and DDG overhauls and schedule changes. In the case of submarine overhauls, the increase in the cost ($72.1 million) is based on experience realized in FY 1984 with the overhaul of the first 688 Class submarine and ongoing 637 class overhauls. In the case of DDG overhauls, cost projections have been revised downward by $13.4 million to reflect more accurately recent return costs from previous overhauls of this type. Finally, there is a reduction of approximately $23 million associated with cancellation of the MOUNT WHITNEY (LCC 20) overhaul in FY 1985 and substitution of a SRA.

QUESTION: What is the current estimate for the RAV on the USS LEXINGTON?

ANSWER: The current estimate for accomplishing the Fiscal Year 1985 RAV on USS LEXINGTON (AVT 10) is $84.2 million, which includes $60.4 million for repairs and $23.8 million for modernization.

COSTS FLUCTUATIONS

QUESTION: Please explain the fluctuations in program support costs for FMP from the original request to actual or current estimate for FY 84 and 85.

ANSWER: Program support for FY 84 has shown an increase of $19.5 million from the original request of $86.4 million to the actual costs of $105.9 million reported in the FY 86 Congressional budget. This increase was due to two factors: (1) growth in Design Service Allocation (DSA), which includes design engineering, development, configuration update, and technical documentation; and (2) program support ship alternations (shipalts). DSA increased approximately $8 million from the time of the FY 84 request. This increase was due to partial implemenation of the Ship Alteration and Improvement Program (SAIP), which extended the lead time for the design development. The remaining FY 84 increase is included in the shipalts line. This increase is mainly attributable to weight/moment compensation shipalts being added for carriers, DD-963s, LPHs and DDGs and computer documentation shipalts being added to the DD-963 class.

FY 85 reflects a $17.7 million increase from the requested amount of $119.3 million to the current estimate of $137 million. The DSA requested amount of $116.5 million represents a $10.7 million increase over the orginal request. This increase was a result of full implemenation of SAIP. The remaining FY 85 increase is attributable to the addition of two seperate funding lines being included under program support. One item, class improvement engineering, was previously listed under hull, mechanical and engineering and is now more correctly reflected under program support. The other line, CVN shock alterations, was a new item to the FMP.

SHIP MAINTENANCE AND MODERNIZATION

QUESTION: What is causing the average cost decrease in outfitting material for overhauls on submarines in FY 1986?

ANSWER: The average cost of outfitting material for submarines in overhaul was budgeted at $.94 million in FY 1985 vice $.83 million in FY 1986. The $.11 million decrease largely reflects the reduction in the NSF rates. This decrease does not affect purchase levels.

QUESTION: The FY 1984 estimate for SLQ-32 outfitting was $5.2 million. The FY 1984 actual was $23.5 million. What caused this change? What is the effect on FY 1985 and FY 1986 requirements?

ANSWER: The increase was caused by a new initiative in FY 84 to backfit spares on previously installed SLQ-32's on approximately 200 ships. The SLQ-32 outfitting program for new equipment spares was originally budgeted at $5.2 million. The backfit effort was required to increase the allowance of spares for previously installed SLQ-32's. The cost to the outfitting program in FY 1984 was $18.3 million for the backfitting effort and $5.2 million for new equipment spares. The effect on FY 1985 and FY 1986 requirements is zero because the backfit effort was completed in FY 1984.

QUESTION: Ship overhauls are decreasing by more than 35%. Why are berthing and messing requirements increasing?

ANSWER: The overhauls are decreasing, however, Drydocking Restricted Availabilities and Drydocking Planned Maintenance Availabilities double from 12 in FY 1985 to 24 in FY 1986. This increase results in shorter but more frequent barge utilization periods. It is much more costly when a greater number of ships utilize the barges or contractor provided quarters. A major factor contributing to these increased costs is the charges for towing from one activity to another which are more frequent during these shorter availabilities. There are also costs associated with the preparation for towing which include shutting down tanks, putting on navigation lights, closing up portholes and rigging the towing bridle. Routine maintenance costs, which are required between availabilities when the barge is uninhabited, increase as well. In addition to these maintenance costs, there are costs for security guards to ensure that the barge is not tampered with when uninhabited. Thus, additional costs are incurred when a barge is uninhabited. Based on the above justification, berthing and messing requirements increase in FY 1986.

QUESTION: Last year's estimate for outfitting costs in FY 1984 was $254 million. The actual cost was nearly $19 million higher. What programs were curtailed to allow additional outfitting funds? What is the effect on future requirements for outfitting?

ANSWER: During FY 1984, the Navy experienced a favorable contracting environment for private sector ship maintenance work. As a result, savings could be applied to emergent fleet outfitting requirements.

QUESTION: Please discuss the $10 million reduction in FY 1985 associated with major outfitting reassessment.

ANSWER: Approximately $4.0 million of the reduction in FY 1985 was possible by correcting an error in the calculation of inflation for purchases from the Defense Logistics Agency. The remaining reduction is based on a revision in the calculation procedure used for major outfitting of ships during planned maintenance availabilities.

QUESTION: What activities are funded in Maintenance Improvement Support? What is causing the $17.5 million increase?

ANSWER: The Maintenance Improvement Support sub-activity group of the Ship Maintenance and Modernization program includes funding for the Intermediate Maintenance Upgrade program ($12,253,000) and the Surface Ship Maintenance and Performance Monitoring program ($43,815,000).

The Intermediate Maintenance Upgrade program in FY 1986 includes an increase of $4,447,000 over FY 1985 funding. This increase includes -$364,000 for inflation, -$114,000 as a transfer to BA 7 for the Personnel and Training Analysis Office, and $4,295,000 for program growth. The program growth includes $3,365,000 for Shore Intermediate Maintenance Activity equipment at Long Beach, Portsmouth, Mayport, Norfolk, Charleston, and Guantanamo Bay; -$1,233,000 for completed equipment upgrades at

Little Creek and New London; and $2,802,000 for Automatic Test Equipment and Test Program set reproductions.

The Surface Ship Maintenance and Performance Monitoring program in FY 1986 includes an increase of $12,491,000 over FY 1985. This increase consists of $487,000 for inflation, a functional transfer of $3,613,000 from BA 7, and program changes of $8,391,000. The program changes include $878,000 for quarterly machinery evaluations for 11 systems added to the EOC program; $2,672,000 for diagnostic technique development and development of new procedures for additional ship classes; $8,920,000 for the introduction of six ship classes to the phased maintenance and EOC programs, including the addition of 77 ships to the EOC program; -$3,673,000 for decreasing requirements for technical documentation and SNAP II replacements for FFG-7s; and -$406,000 in planning for PHM availabilities.

REVISIONS TO COST ESTIMATING GUIDELINES

During the Naval Sea System Command's preparation of the fiscal years 1984-88 Five Year Shipbuilding Plan, the cost estimating guidelines were changed significantly. For estimating program manager's growth (PMG), the Naval Sea System Command Comptroller verified the validity of calculating PMG as a percentage of government furnished equipment and eliminated program manager's discretionary additions to PMG.

For fiscal year 1986 the criteria for calculating PMG was changed. It is now calculated as a percentage of end cost minus escalation. Under the new policy, PMG can range from 2 to 5 percent of end cost less escalation, depending on ship complexity, budget quality of the cost estimate, and whether the ship is a lead or follow-on ship. In fiscal year 1986, for the Dock Landing Ship (LSD), the Amphibious Assault Ship (LHD), and the Fleet Oiler (TAO), use of the new PMG criteria increased the total PMG by $25.4 million over the amount calculated using the previous estimating method.

QUESTION: What is the justification for changing the PMG cost estimating policy? What is the net effect of this change on the total SCN request?

ANSWER: The requirement for reserves has varied from year-to-year, program-to-program, and at various stages of each program. Analyses have shown that an initial overall reserve of 3 to 4 percent of total SCN costs (less escalation on basic construction) has been required in the past for program execution. Although the primary method for calculating Program Manager's Reserve (10 percent of GFE) was adequate for overall SCN results, in most cases the calculation was difficult to accept on an individual ship basis, e.g. CGs getting almost $200 million in PMG due to the high cost of GFE, while an AOE only picks up about $10 million. In the last few years the Congress has reduced PMG reserves on ship programs that had substantial amounts of GFE because of their perception that this overstated PMG reserves on these programs. The PMG policy was changed to eliminate spiking of certain PMG cost estimates for ships with heavily weighted GFE programs. The net effect of this new policy results in a slight decrease in PMG reserves from those if based on the old policy for the FY 1986 SCN Shipbuilding Program. This comparison will vary based on mix of heavily weighted GFE ship programs vs lower mix programs in any particular program year.

QUESTION: Since the "change order" account in each ship estimate is to allow for potential modifications that may or may not be made, why does the Navy include change orders as part of end cost when calculating PMG?

ANSWER: The statistical analyses conducted on historical program growth was developed while using SCN end costs less only escalation on basic construction. Change orders were included in the end cost data base and, therefore, are part of the overall growth criteria.

QUESTION: The Secretary of the Navy recently stated that all ships will use fixed price incentive contracts. Given that ship estimates include an amount for change orders and escalation, why are PMG funds needed as well on this type of contract?

ANSWER: PMG funds are needed to cover cost growth in SCN ship end costs. At the time of development of the cost estimates for any particular budget submission all elements of an end cost must be considered. In addition to the basic ship contract and its attendant escalation and change orders, other elements of a cost estimate must be considered for potential growth such as:

(a) Government furnished material
(b) Warranty items
(c) Tech manuals
(d) Supervisor of Shipbuilding responsibilities
(e) On board repair parts
(f) Contractor support services
(g) HM&E Test and Instrumentation
(h) HM&E engineering
(i) MSC administration costs, if required.

Additionally, even with planned awards under fixed price incentive contracts the actual market conditions that will exist at the time of award are not known some 2 years earlier when the cost estimates are determined. If the extremely optimistic bidding patterns fail to materialize when the FY 1986 program awards are made, cost growth could be experienced in the basic ship contract award area even though on the basis of fixed price incentive. Change orders and escalation provisions are not included in an end cost to allow for changing market conditions.

COST ESTIMATING GUIDELINES FOR CONVERSIONS

STATEMENT OF FACT

While the Navy does have cost estimating guidelines for new construction programs, it does not have similar guidelines for conversion programs.

QUESTION: How does the Navy estimate change orders and PMG for conversion programs?

ANSWER: Change orders are estimated on a case-by-case basis for conversions. The new policy for estimating PMG is used for both new construction and conversion. Conversion change orders are normally estimated to be at a percentage rate higher than new construction due to additional costs encountered for equipment repairs that are known only after the shipbuilder opens and inspects machinery items. These repairs are paid for through the change order allowance in most contracts.

QUESTION: Why are there no set guidelines for these programs (conversions)?

ANSWER: Ship capability improvements are made to existing ships in the fleet through different techniques. Some are done by conversions, while others are done by SLEP (CVs) or modernization (BBs). It has been found that a given set of standards do not necessarily apply to these different means of ship improvements mainly due to differences in ship conditions, required service life and mission performance. Therefore, conversion program guidelines are tailored based on the historical performance of the most similar program/ship.

LPD-4 AMPHIBIOUS TRANSPORT DOCK SLEP

QUESTION: Does the Navy plan to allocate the $15 million appropriated in FY 1985 for the LPD-4 SLEP? If not, what is the Navy plan for these excess funds?

ANSWER: Yes, the Navy plans to allocate and obligate these funds to procure long lead time material and to fund the planning contract for the first of the LPD-4 (class) SLEPs.

T-AG ACOUSTIC RESEARCH SHIP

QUESTION: The USNS Hayes, formerly a TAGOR-16 Military Sealift Command ship, is slated for conversion to a TAG Acoustic Research ship, beginning in February 1987. The Navy has requested $68.9 million in fiscal year 1986. The Navy's schedule calls for contract award in November 1985, sixteen months before starting the Hayes' conversion in February 1987. However, the total amount needed in fiscal year 1986 for design and propulsion is about $6 million. Why isn't $6 million advance procurement funding for detailed design and long lead time material procurement sufficient in fiscal year 1986?

ANSWER: While the start of conversion may not begin until February 1987, the shipbuilder must initiate numerous actions to support the conversion start date. In addition to detail design and long lead time material procurement, the shipbuilder will begin survey of the ship and rip-out of existing spaces in preparation for conversion, inspect shipboard systems that are planned for retention, develop material condition reports, order replacements for defective items discovered during the open and inspect phase, and conduct factory noise tests of equipments planned for installation aboard T-AG. A substantial amount of material and manufactured items needed for the conversion will also be purchased during this period, in order to be on hand when the start of conversion begins.

QUESTION: Why does the Navy need full funding of $68.9 in fiscal year 1986 for conversion scheduled to begin in February 1987?

ANSWER: Congress has endorsed full funding of programs and the request for the T-AG acquisition complies with this policy. A request for funding to cover only the detail design and propulsion machinery would result in an incrementally funded contract and violate the full funding policy.

At this point, a discussion of the full funding concept may be helpful. The objective of full funding is to provide funds at the outset for the total estimated cost of a given item so that Congress and the public can be fully aware of the item's cost when first presented in the budget. Two general exceptions to this policy are advance procurement for long leadtime items and advance Economic Order Quantity (EOQ) procurement for multiyear procurement. Neither of these exceptions are applicable to the T-AG acquisition.

As mentioned above, the shipbuilder will be required to initiate many actions upon contract award, all of which are necessary to support the conversion schedule and meet the contract delivery requirement. Therefore, the Navy's budget request includes $68.9 million for T-AG Acoustic Research Ship in fiscal year 1986.

T-AGOS OCEAN SURVEILLANCE SHIP

QUESTION: Halter Marine Inc's bid for the T-AGOS basic construction and outfitting of these ships is 40 percent less than the Navy's estimate for these ships, as provided to the Congress for the fiscal year 1985 appropriation and in the budget request submitted for fiscal year 1986. Given the problems encountered in the past with this ship class, what guarantees does the Navy have that Halter Marine Inc. will be able to deliver at cost and on schedule the T-AGOS 13-18 ships? What does the Navy plan to do with the additional funds appropriated in fiscal year 1985 but not now needed due to this favorable contract award?

ANSWER: Halter Marine, Incorporated is contractually obligated to deliver T-AGOS 13-18 on schedule and at the fixed prices set forth in the contract, subject to compensation adjustments for escalation. Prior to the award the Navy conducted a financial review of both Halter and its parent company, Trinity Industries, and determined that Halter is financially capable of performance. Furthermore, Trinity Industries has unconditionally guaranteed Halter's performance under the contract.

The remaining asset after ship award is $17.9 million. This asset has been identified by DOD as part of the prior year savings to be transferred to offset FY 1986 TOA.

QUESTION: The T-AGOS serves as a towing platform for the SURTASS underwater array system that performs the mission assigned to this system. The SURTASS system has been tested and deployed on T-AGOS 1, successfully meeting Navy expectations, according to Navy officials. This system will be procured for the fiscal year 1985 T-AGOS ships, as well as for the planned 4 additional T-AGOS ships. NAVELEX officials have indicated that money appropriated in fiscal year 1985 for procurement of this system for T-AGOS 13 and 14 is being held by the Navy which plans to award the contract for both the fiscal year 1985 and fiscal year 1986 requested ships in January 1986. Why has the Navy held up award of the contract for this system?

ANSWER: The Navy has modified the SURTASS procurement plan to permit competitive contract awards. The original plan for system integration and installation was to award a sole source contract to Hughes Aircraft Company as a follow-on to the initial twelve (12) systems. The Navy has reconsidered this approach in favor of a competitive contracting strategy. In addition, we are in the process of qualifying a second source for both the towed array and tow cable. Upon qualification of a second source, a competitive procurement will be conducted. It should be noted that various components of the SURTASS system are currently under contract or are planned for award during fiscal year 1985. These equipments include the AN/UYS-1, AN/UYK-20, AN/UYH-3, and others.

QUESTION: What potential economic gain exists to justify this retention of over $50 million for over 16 months in Navy accounts,past the year of appropriation?

ANSWER: The introduction of competition and dual sourcing for certain SURTASS hardware and system integration has the potential to save approximately $3 million in fiscal year 1985. Further savings will be recognized in follow-on SURTASS procurements. In addition, this contracting strategy enhances the industrial base while providing the Navy an alternate source for these equipments and services.

QUESTION: Why were these funds requested in fiscal year 1985 if the Navy foresaw this delayed award?

ANSWER: The funds were requested as part of the FY 85 appropriation to conform with the full funding policy.

QUESTION: Provide the delivery schedule of T-AGOS 13 through 16 and the corresponding delivery schedule for SURTASS to be installed on them:

ANSWER: The following is the T-AGOS 13-16 delivery schedule with the corresponding delivery schedule for SURTASS to be installed on them:

	SURTASS DELIVERY	SHIP DELIVERY
T-AGOS 13	10/87	3/88
T-AGOS 14	2/88	7/88
T-AGOS 15	6/88	11/88
T-AGOS 16	10/88	3/89

STRATEGIC SEALIFT

The Navy maintains in conjunction with the Maritime Administration a group of ships to provide quick response sealift capability to U.S. forces. The Ready Reserve Fleet (RRF) consists of commercial type cargo carrying ships and tankers which are maintained in either 5, 10, or 20 day readiness status. In 1984, the requirement for this force was increased from 30 to 77 ships to be realized by fiscal year 1987. Recently, the Navy revised its requirement to 100 ships. The Current fiscal year 1986 budget request of $203.4 million for Strategic Sealift reflects this increase, and is seven times the original fiscal year 1986 estimate of $32 million made in January 1984.

QUESTION: Is this increase in Navy's requirement for a RRF necessary because of changes in military lift requirements or is it because of changes in projections concerning availability of commercial ships? Is it a combination of both? Please fully explain the need to increase the size of the RRF again.

ANSWER: The increase in Navy's requirement for a Ready Reserve Force (RRF) is based primarily on the results of the recently completed RRF Resizing Study which incorporated the latest Maritime Administration projections of an even greater decline in U. S. flag shipping by 1990. The increase also takes into consideration those lift shortfalls identified by the 1984 DOD Sealift Study that used a 77 ship RRF in its analysis. The RRF goal has been expanded from 77 ships (61 dry cargo and 16 tankers) to 116 ships (100 dry cargo and 16 tankers).

QUESTION: Are the fiscal year 1986 requirements stable and/or when will the Navy next revise its requirement?

ANSWER: The fiscal year 1986 requirements are considered stable, particularly in the area of dry cargo lift requirements. A more detailed study of POL lift requirements is nearing completion and may indicate the need to increase the number of tankers in the RRF above the 16 previously estimated. MARAD projections are generally updated at two year intervals. Any dramatic change to the U. S. flag dry cargo merchant fleet would have a corresponding impact in the future.

The RRF was initially formed for the purpose of obtaining breakbulk ships which were quickly disappearing from the U.S. flag fleet. Later a need to obtain RO/RO ships was identified.

QUESTION: What are the current priorities of ships needed by type? Provide an explanation for each ship type.

ANSWER: This year's Request for Proposal, issued 11 March 1985, requests offers to sell Roll-on/Roll-off ships, heavy lift ships, containerships for ultimate conversion to Auxiliary Crane Ships (TACS), barge carrying ships, clean product tankers, self-sustaining breakbulk ships and Lash barges in decreasing order of priority. The following provides a brief explanation by type of ship of the military use requirement:

o RO/RO ships - provide the lift capability for the many large and outsized vehicles that would be required in the early stages of deployment of combat units. Their ability to rapidly load and offload enhances their utility for rapid deployment.

o Heavy lift ships - provide the unique capability to transport many of the Army's lighterage (LCU's) that are required in the logistics-over-the-shore operations. These craft are not self-deployable and cannot be transported on ships with lesser capability.

o Containerships - required for future TACS conversions. The number of containerships in the National Defense Reserve Fleet or those projected for turn-in at the inception of the program is insufficient to complete the 12 ship program. Acquisition of suitable containerships is required.

o Lash ships - provide the capability to transport additional ship-to-shore lighterage as well as their own preloaded barge system that is also suitable for ship-to-shore operation.

o Clean product tankers - required to provide the POL lift capability necessary to sustain the initial buildup of combat forces in theater.

QUESTION: How many of each type ship does Navy plan to purchase with fiscal year 1986 appropriations?

ANSWER: Although the final ship type mix will be dependent upon those ships offered and the cost, Navy desires to acquire approximately ten RO/RO ships, two heavy lift ships, 2 containerships and 1 Lash ship from this year's funding request.

QUESTION: Into which readiness category will these new ships be placed?

ANSWER: All the ships to be acquired in fiscal year 1986 will be placed in a 5 or 10 day readiness status. Older ships, currently in the RRF will be reassigned to 20 days readiness status as newer, more capable ships are acquired.

QUESTION: What actions are planned to ensure that the Navy can manage and maintain these ships within the readiness guidelines for the RRF?

ANSWER: Two initiatives currently being pursued that are expected to increase the overall effectiveness of force management, improve maintenance and assure readiness are the assignment of a general agent for each ship and the outporting of all RRF-5 ships and some selected RRF-10 ships.

NATO has earmarked a large number of suitable sealift ships, including RO/ROs, containerships, and breakbulk ships to supplement the RRF in a NATO contingency.

QUESTION: How is this reflected in the current revision of U.S. requirements?

ANSWER: The strategic sealift requirement has been based on Defense Guidance, using a U. S. only scenario. Should the scenario conflict escalate into a global war, NATO sealift assets would be required to meet the additional lift.

QUESTION: Provide a listing of identified NATO sealift assets by NATO country and ship type.

ANSWER: The following list of NATO sealift assets, by country and ship type is provided:

NATO SHIPS BY NATIONALITY

SHIP NAME	NATIONALITY	TYPE
MONSOON	BELGIUM	BREAKBULK
FABIOLAVILLE	BELGIUM	BREAKBULK
MONARCH	BELGIUM	BREAKBULK
MONTENAKEN	BELGIUM	BREAKBULK
RUBENS	BELGIUM	BREAKBULK
MONTAIGLE	BELGIUM	BREAKBULK
MEMLING	BELGIUM	BREAKBULK
MONTSALVA	BELGIUM	BREAKBULK
MONTFORT	BELGIUM	BREAKBULK
DART CONTINENT	BELGIUM	CONT NSS40
PLANTIN	BELGIUM	CONT NSS40
E. R. BRUGGE	BELGIUM	CONT BB40
E.R. BRUSSEL	BELGIUM	CONT BB40
MERCATOR	BELGIUM	CONT NSS40
DART EUROPE	BELGIUM	CONT NSS40
ORTELIUS	BELGIUM	CONT NSS40
QUELLIN	BELGIUM	CONT BB20
VAN DYCK	BELGIUM	CONT BB20
DORTE SKOU	DENMARK	BREAKBULK
DIANA SKOU	DENMARK	BREAKBULK
DAGMAR SKOU	DENMARK	BREAKBULK
DINNA SKOU	DENMARK	BREAKBULK
DITTE SKOU	DENMARK	BREAKBULK
STJERNEBORG	DENMARK	BREAKBULK
CHARLOTTENBORG	DENMARK	BREAKBULK
DORIT SKOU	DENMARK	BREAKBULK
DOLLY SKOU	DENMARK	BREAKBULK
SKODSBORG	DENMARK	BREAKBULK
CHRISTIANSBORG	DENMARK	BREAKBULK
DANA FUTURA	DENMARK	RO/RO
DANA MAXIMA	DENMARK	RO/RO
DANA HAFNIA	DENMARK	RO/RO
CORNELIA MAERSK	DENMARK	CONT SS40
CHASTINE MAERSK	DENMARK	CONT SS40
CHARLOTTE MAERSK	DENMARK	CONT SS40
CHRISTIAN MAERSK	DENMARK	CONT SS40
CECILIE MAERSK	DENMARK	CONT SS40
CLARA MAERSK	DENMARK	CONT SS40
LAURA MAERSK	DENMARK	CONT NSS40
LEXA MAERSK	DENMARK	CONT NSS40
FIONIA	DENMARK	CONT NSS40
LICA MAERSK	DENMARK	CONT NSS40
SUMBAWA	DENMARK	CONT NSS40
LEISE MAERSK	DENMARK	CONT NSS40
DRAGOR MAERSK	DENMARK	CONT NSS40
MCKINNEY MAERSK	DENMARK	CONT BB40
MARCHEN MAERSK	DENMARK	CONT BB40
MARGRETHE MAERSK	DENMARK	CONT BB40
MATHILDE MAERSK	DENMARK	CONT BB40

SONGKHLA	DENMARK	CONT NSS40
MEONIA	DENMARK	CONT NSS40
ANDERS MAERSK	DENMARK	CONT NSS40
FALSTRIA	DENMARK	CONT NSS40
ADRIAN MAERSK	DENMARK	CONT NSS40
CLIFFORD MAERSK	DENMARK	CONT NSS40
ARTHUR MAERSK	DENMARK	CONT NSS40
ALVA MAERSK	DENMARK	CONT NSS40
ARNOLD MAERSK	DENMARK	CONT NSS40
AXEL MAERSK	DENMARK	CONT NSS40
JUTLANDIA	DENMARK	CONT NSS40
ALBERT MAERSK	DENMARK	CONT NSS40
ARILD MAERSK	DENMARK	CONT NSS40
ANNA MAERSK	DENMARK	CONT NSS40
SELANDIA	DENMARK	CONT NSS40
BORINGIA	DENMARK	CONT NSS40
SINALOA	DENMARK	CONT BB20
SARGODHA	DENMARK	CONT BB20
SIENA	DENMARK	CONT BB20
SAMOA	DENMARK	CONT BB20
SIMBA	DENMARK	CONT BB20
IBERIA	W. GERMANY	BREAKBULK
CAP SAN MARCO	W. GERMANY	BREAKBULK
MOSEL	W. GERMANY	BREAKBULK
SANTA ELENA	W. GERMANY	BREAKBULK
CAP BRETON	W. GERMANY	BREAKBULK
BORUSSIA	W. GERMANY	BREAKBULK
HILDESHEIM	W. GERMANY	BREAKBULK
CAP SAN AUGUSTIN	W. GERMANY	BREAKBULK
NECKAR	W. GERMANY	BREAKBULK
KARIN BORNHOFEN	W. GERMANY	BREAKBULK
LUISE BORNHOFEN	W. GERMANY	BREAKBULK
SLOMAN NAJADE	W. GERMANY	BREAKBULK
UNIDO	W. GERMANY	BREAKBULK
HEIDELBERG	W. GERMANY	BREAKBULK
LINA FISSER	W. GERMANY	BREAKBULK
THURINGIA	W. GERMANY	BREAKBULK
FLAVIA	W. GERMANY	BREAKBULK
ARGO	W. GERMANY	RO/RO
KONGSFJORD	W. GERMANY	RO/RO
PROJECT AMERICAS	W. GERMANY	RO/RO
NESTOR	W. GERMANY	RO/RO
TRANSFINLANDIA	W. GERMANY	RO/RO
RADBOD	W. GERMANY	RO/RO
RAILSHIP I	W. GERMANY	RO/RO
LILLOOET	W. GERMANY	RO/RO
TRANSGERMANIA	W. GERMANY	RO/RO
USAMBARA	W. GERMANY	CONT SS40
KATJANA	W. GERMANY	CONT SS40
ULANGA	W. GERMANY	CONT SS40
CORDILLERA EXPRESS	W. GERMANY	CONT SS40
PAMINA	W. GERMANY	CONT SS40
PALOMA	W. GERMANY	CONT SS40

MONTE OLIVIA	W. GERMANY	CONT SS40
CALEDONIA	W. GERMANY	CONT SS40
COLUMBUS CANTERBURY	W. GERMANY	CONT SS40
CITY OF LIVERPOOL	W. GERMANY	CONT SS40
COLUMBIA	W. GERMANY	CONT SS40
COLUMBUS LOUISIANA	W. GERMANY	CONT SS40
MONTE ROSA	W. GERMANY	CONT SS40
MONTE SARMIENTO	W. GERMANY	CONT SS40
CARIBIA EXPRESS	W. GERMANY	CONT SS40
URUNDI	W. GERMANY	CONT SS40
CALIFORNIA	W. GERMANY	CONT SS40
ALEMANNIA EXPRESS	W. GERMANY	CONT NSS40
NURNBERG EXPRESS	W. GERMANY	CONT NSS40
HAMBURG EXPRESS	W. GERMANY	CONT NSS40
ERLANGEN EXPRESS	W. GERMANY	CONT NSS40
BACO-LINER 1	W. GERMANY	BARGE TRAN
BACO-LINER 2	W. GERMANY	BARGE TRAN
HOLSTENCRUISER	W. GERMANY	CONT BB40
CAROLINA	W. GERMANY	CONT BB40
STUBBENHUK	W. GERMANY	CONT BB40
HOLSTENTRADER	W. GERMANY	CONT BB40
CHRISTIAN WESCH	W. GERMANY	CONT BB40
HOLSTENSAILOR	W. GERMANY	CONT BB40
CHARLOTTA	W. GERMANY	CONT BB40
E.L.M.A. DOS	W. GERMANY	CONT BB40
FRIESENSTEIN	W. GERMANY	CONT BB40
HOLSTENRACER	W. GERMANY	CONT BB40
RENEE RICKMERS	W. GERMANY	CONT BB40
STEINHOEFT	W. GERMANY	CONT BB40
BERTRAM RICKMERS	W. GERMANY	CONT BB40
HEIDENHEIM	W. GERMANY	CONT BB40
SANDRA WESCH	W. GERMANY	CONT BB40
KOELN EXPRESS	W. GERMANY	CONT NSS40
HONGKONG EXPRESS	W. GERMANY	CONT NSS40
COLUMBUS VICTORIA	W. GERMANY	CONT NSS40
LEVERKUSEN EXPRESS	W. GERMANY	CONT NSS40
LUDWIGSHAFEN EXPRESS	W. GERMANY	CONT NSS40
TOKIO EXPRESS	W. GERMANY	CONT NSS40
DUSSELDORF EXPRESS	W. GERMANY	CONT NSS40
HOECHST EXPRESS	W. GERMANY	CONT NSS40
COLUMBUS NEW ZEALAND	W. GERMANY	CONT NSS40
AMERICA EXPRESS	W. GERMANY	CONT NSS40
STUTTGART EXPRESS	W. GERMANY	CONT NSS40
COLUMBUS QUEENSLAND	W. GERMANY	CONT NSS40
BREMEN EXPRESS	W. GERMANY	CONT NSS40
MELBOURNE EXPRESS	W. GERMANY	CONT NSS40
COLUMBUS AUSTRALIA	W. GERMANY	CONT NSS40
COLUMBUS AMERICA	W. GERMANY	CONT NSS40
SYDNEY EXPRESS	W. GERMANY	CONT NSS40
INGELHEIM	W. GERMANY	CONT BB20
RUDESHEIM	W. GERMANY	CONT BB20
SLOMAN MERCUR	W. GERMANY	CONT BB20
HOLSTENSTEIN	W. GERMANY	CONT BB20
UNTERTURKHEIM	W. GERMANY	CONT BB20

AMADO	W. GERMANY	CONT BB20
ELBE	W. GERMANY	CONT BB20
SLOMAN MIRA	W. GERMANY	CONT BB20
TABORA	W. GERMANY	CONT BB20
RUSSELSHEIM	W. GERMANY	CONT BB20
SLOMAN NEREUS	W. GERMANY	CONT BB20
ADELFOTIS	GREECE	BREAKBULK
IRENES IDEAL	GREECE	BREAKBULK
HELLENIC GLORY	GREECE	BREAKBULK
HELLENIC SEAMAN	GREECE	BREAKBULK
FEAX	GREECE	BREAKBULK
WISMAR	GREECE	BREAKBULK
HELLENIC HERO	GREECE	BREAKBULK
ALIAKMON LIGHT	GREECE	BREAKBULK
AEGIS IONIC	GREECE	BREAKBULK
HELLENIC SKY	GREECE	BREAKBULK
FINIX	GREECE	BREAKBULK
HELLENIC WAVE	GREECE	BREAKBULK
HELLENIC PATRIOT	GREECE	BREAKBULK
HELLENIC SUN	GREECE	BREAKBULK
AEGIS BALTIC	GREECE	BREAKBULK
ETERNAL PEACE	GREECE	BREAKBULK
HELLENIC SEA	GREECE	BREAKBULK
HELLENIC CHAMPION	GREECE	BREAKBULK
ARGOLIKOS	GREECE	BREAKBULK
HELLENIC PIONEER	GREECE	BREAKBULK
AEGIS HARMONIC	GREECE	BREAKBULK
HELLENIC SPIRIT	GREECE	BREAKBULK
ATREVIDA	GREECE	BREAKBULK
GRIGORIOS C IV	GREECE	BREAKBULK
AEGIS PRACTIC	GREECE	BREAKBULK
PENELOPE II	GREECE	BREAKBULK
ALHAMBRA	GREECE	BREAKBULK
ILIOS	GREECE	BREAKBULK
IRENES LOGIC	GREECE	BREAKBULK
IKTINOS	GREECE	BREAKBULK
AEGIS BRITTANIC	GREECE	BREAKBULK
ANNOULA II	GREECE	BREAKBULK
HELLENIC PRIDE	GREECE	BREAKBULK
THALASSINI KYRA	GREECE	BREAKBULK
MANINA III	GREECE	BREAKBULK
DIMITRIS	GREECE	BREAKBULK
GOOD HERALD	GREECE	BREAKBULK
AEGIS HISPANIC	GREECE	BREAKBULK
HELLENIC IDEAL	GREECE	BREAKBULK
ATTIKA HOPE	GREECE	BREAKBULK
HELLENIC DESTINY	GREECE	BREAKBULK
ARIADNE	GREECE	BREAKBULK
CAPITAN LUKIS	GREECE	BREAKBULK
LAMBROS TSAGLIOTIS	GREECE	BREAKBULK
EVGENIA	GREECE	BREAKBULK
AEGIS ATHENIC	GREECE	BREAKBULK
HELLENIC SPLENDOR	GREECE	BREAKBULK

YANNIS	GREECE	BREAKBULK
FAETHON	GREECE	BREAKBULK
HELENA C	GREECE	BREAKBULK
HELLENIC STAR	GREECE	BREAKBULK
ALIKI I P	GREECE	BREAKBULK
PETRADI	GREECE	BREAKBULK
HELLENIC GRACE	GREECE	BREAKBULK
KYRA	GREECE	BREAKBULK
KONKAR NEREUS	GREECE	BREAKBULK
KRONOS	GREECE	BREAKBULK
MUNSTERLANDES	GREECE	BREAKBULK
KONKAR POSEIDON	GREECE	BREAKBULK
KRITI PEARL	GREECE	BREAKBULK
ZETTA	GREECE	BREAKBULK
GORGO	GREECE	BREAKBULK
HELLENIC NAVIGATOR	GREECE	BREAKBULK
ERECTHION	GREECE	BREAKBULK
HELLENIC CHALLENGER	GREECE	BREAKBULK
HELLENIC LEADER	GREECE	BREAKBULK
ALIAKMON LEADER	GREECE	BREAKBULK
IASON	GREECE	BREAKBULK
HELLENIC EXPLORER	GREECE	RO/RO
HELLAS	GREECE	RO/RO
HELLENIC VALOR	GREECE	RO/RO
SYRIA	GREECE	RO/RO
CONSTELLATION ENTERPRISE	GREECE	RO/RO
HELLENIC INNOVATOR	GREECE	RO/RO
SEASPEED AMERICA	GREECE	RO/RO
HELLENIC FAITH	GREECE	CONT NSS40
HELLENIC ADVENTURE	GREECE	CONT NSS40
HELLENIC FRIENDSHIP	GREECE	CONT NSS40
ANEMOS	GREECE	CONT NSS40
PELAGOS	GREECE	CONT NSS40
FANEOS	GREECE	CONT BB20
SERENA	ITALY	BREAKBULK
PUNTA STELLA	ITALY	BREAKBULK
PIA COSTA	ITALY	BREAKBULK
PUNTA BIANCA	ITALY	BREAKBULK
TRIESTE	ITALY	BREAKBULK
GIOACCHINO LAURO	ITALY	BREAKBULK
LUIGI D'AMICO	ITALY	BREAKBULK
NAI MONREALE	ITALY	BREAKBULK
CAPO SAN MARCO	ITALY	BREAKBULK
LUIGI ORLANDO	ITALY	BREAKBULK
TIGRE	ITALY	BREAKBULK
CESARE D'AMICO	ITALY	BREAKBULK
CARLOTTA F.	ITALY	BREAKBULK
ESQUILINO	ITALY	BREAKBULK
GAZZELLA	ITALY	BREAKBULK
AURELIA DI MAIO	ITALY	BREAKBULK
VILLARPEROSA	ITALY	BREAKBULK
CORTINA	ITALY	BREAKBULK
PAOLO D'AMICO	ITALY	BREAKBULK

COMANDANTE REVELLO	ITALY	RO/RO
FENICIA EXPRESS	ITALY	CONT+RO/RO
LEVANTE EXPRESS	ITALY	CONT+RO/RO
ANDREA MERZARIO	ITALY	CONT+RO/RO
D ALBERTIS	ITALY	CONT SS40
DA MOSTO	ITALY	CONT SS40
PANCALDO	ITALY	CONT SS40
AFRICA	ITALY	CONT NSS40
EUROPA	ITALY	CONT NSS40
EGIZIA	ITALY	CONT BB40
LLOYDIANA	ITALY	CONT NSS40
ACADIA	ITALY	CONT NSS40
AMERICANA	ITALY	CONT NSS40
NIPPONICA	ITALY	CONT NSS40
MEDITERRANEA	ITALY	CONT NSS40
ITALICA	ITALY	CONT NSS40

DOCK EXPRESS 11	NETHERLAND	BREAKBULK
NEDLLOYD NAGOYA	NETHERLAND	BREAKBULK
NEDLLOYD HOLLAND	NETHERLAND	BREAKBULK
NEDLLOYD WAALEKERK	NETHERLAND	BREAKBULK
THAMESHAVEN	NETHERLAND	BREAKBULK
NEDLLOYD KEMBLA	NETHERLAND	BREAKBULK
NEDLLOYD MAIN	NETHERLAND	BREAKBULK
NEDLLOYD FORCADOS	NETHERLAND	BREAKBULK
NEDLLOYD WISSEKERK	NETHERLAND	BREAKBULK
NEDLLOYD HONSHU	NETHERLAND	BREAKBULK
NEDLLOYD KOREA	NETHERLAND	BREAKBULK
NEDLLOYD LINGE	NETHERLAND	BREAKBULK
NEDLLOYD ORANJESTAD	NETHERLAND	BREAKBULK
NEDLLOYD KIMBERLEY	NETHERLAND	BREAKBULK
NEDLLOYD LEUVE	NETHERLAND	BREAKBULK
NEDLLOYD SALLAND	NETHERLAND	BREAKBULK
NEDLLOYD NAGASAKI	NETHERLAND	BREAKBULK
DOCK EXPRESS 10	NETHERLAND	BREAKBULK
NEDLLOYD FRAZER	NETHERLAND	BREAKBULK
NEDLLOYD SCHIE	NETHERLAND	BREAKBULK
NEDLLOYD AMSTERDAM	NETHERLAND	BREAKBULK
NEDLLOYD KOBE	NETHERLAND	BREAKBULK
NEDLLOYD KYOTO	NETHERLAND	BREAKBULK
NEDLLOYD SPAARNEKERK	NETHERLAND	BREAKBULK
NEDLLOYD HOBART	NETHERLAND	BREAKBULK
NEDLLOYD WILLEMSKERK	NETHERLAND	BREAKBULK
ALUDRA	NETHERLAND	BREAKBULK
NEDLLOYD NASSAU	NETHERLAND	BREAKBULK
NEDLLOYD MADISON	NETHERLAND	BREAKBULK
NEDLLOYD RHONE	NETHERLAND	BREAKBULK
NEDLLOYD FLEVOLAND	NETHERLAND	BREAKBULK
NEDLLOYD STREEFKERK	NETHERLAND	BREAKBULK
NEDLLOYD SCHELDE	NETHERLAND	BREAKBULK
EEMHAVEN	NETHERLAND	BREAKBULK
NEDLLOYD FREMANTLE	NETHERLAND	BREAKBULK
NEDLLOYD WESER	NETHERLAND	BREAKBULK
NEDLLOYD LOIRE	NETHERLAND	BREAKBULK

DOCK EXPRESS 12	NETHERLAND	BREAKBULK
NEDLLOYD AMSTELLAND	NETHERLAND	BREAKBULK
NEDLLOYD FRANKLIN	NETHERLAND	BREAKBULK
ALHENA	NETHERLAND	BREAKBULK
NEDLLOYD KATWIJK	NETHERLAND	BREAKBULK
NEDLLOYD SINOUTSKERK	NETHERLAND	BREAKBULK
NEDLLOYD ADELAIDE	NETHERLAND	BREAKBULK
NEDLLOYD NAPIER	NETHERLAND	BREAKBULK
NEDLLOYD HONGKONG	NETHERLAND	BREAKBULK
NEDLLOYD WESTERKERK	NETHERLAND	BREAKBULK
WILLEMSTAD	NETHERLAND	BREAKBULK
NEDLLOYD STEENKERK	NETHERLAND	BREAKBULK
NEDLLOYD FREETOWN	NETHERLAND	BREAKBULK
NEDLLOYD KINGSTON	NETHERLAND	BREAKBULK
NEDLLOYD ROCHESTER	NETHERLAND	RO/RO
NEDLLOYD ROUEN	NETHERLAND	RO/RO
NEDLLOYD ROSARIO	NETHERLAND	RO/RO
NEDLLOYD ROCKANJE	NETHERLAND	RO/RO
NEDLLOYD ROTTERDAM	NETHERLAND	RO/RO
ATLANTIC STAR	NETHERLAND	CONT+RO/RO
ATLANTIC CROWN	NETHERLAND	CONT+RO/RO
IBN ATIK	NETHERLAND	CONT SS40
MIJDRECHT	NETHERLAND	CONT SS40
MOORDRECHT	NETHERLAND	CONT SS40
WATERGEUS	NETHERLAND	CONT NSS40
MOUNTS BAY	NETHERLAND	CONT NSS40
BENATTOW	NETHERLAND	CONT NSS40
NEDLLOYD DELFT	NETHERLAND	CONT NSS40
NEDLLOYD HOORN	NETHERLAND	CONT NSS40
NEDLLOYD HOLLANDIA	NETHERLAND	CONT NSS40
INCOTRANS SPIRIT	NETHERLAND	CONT NSS40
NEDLLOYD DEJIMA	NETHERLAND	CONT NSS40
INCOTRANS SPEED	NETHERLAND	CONT NSS40
LARGS BAY	NETHERLAND	CONT NSS40
BILDERDYK	NETHERLAND	BARGE TRAN
SAFOCEAN MILDURA	NETHERLAND	CONT BB40
NEDLLOYD AMERSFOORT	NETHERLAND	CONT BB20
ALDABI	NETHERLAND	CONT BB20
NEDLLOYD ALKMAAR	NETHERLAND	CONT BB20
NEDLLOYD BREDA	NETHERLAND	CONT BB20
NEDLLOYD BAARN	NETHERLAND	CONT BB20
ALPHACCA	NETHERLAND	CONT BB20
NEDLLOYD BALTIMORE	NETHERLAND	CONT BB20
NEDLLOYD BARCELONA	NETHERLAND	CONT BB20
NEDLLOYD BANGKOK	NETHERLAND	CONT BB20
NEDLLOYD FRESCO	NETHERLAND	CONT BB20
ALNATI	NETHERLAND	CONT BB20
NEDLLOYD BAHRAIN	NETHERLAND	CONT BB20
ANNA PRESTHUS	NORWAY	BREAKBULK
BAVANG	NORWAY	BREAKBULK
THORSWAVE	NORWAY	BREAKBULK
BARBER TALISMAN	NORWAY	BREAKBULK
MARTHA BAKKE	NORWAY	BREAKBULK

TYSLA	NORWAY	BREAKBULK
BARBER TERRIER	NORWAY	BREAKBULK
RAGNA BAKKE	NORWAY	BREAKBULK
HOEGH OPAL	NORWAY	BREAKBULK
WILMONA	NORWAY	BREAKBULK
HOEGH ORCHID	NORWAY	BREAKBULK
FOSSUM	NORWAY	BREAKBULK
TAIKO	NORWAY	BREAKBULK
BARBER THERMOPYLAE	NORWAY	BREAKBULK
HOEGH PILOT	NORWAY	BREAKBULK
BARBER TENNESSEE	NORWAY	BREAKBULK
MILENA	NORWAY	BREAKBULK
CONCORDIA STAR	NORWAY	BREAKBULK
BARBER TSU	NORWAY	BREAKBULK
HOEGH ORRIS	NORWAY	BREAKBULK
WILNINA	NORWAY	BREAKBULK
BARBER TOBA	NORWAY	RO/RO
JOLLY BRUNO	NORWAY	RO/RO
BARBER TAIF	NORWAY	RO/RO
BARBER TONSBERG	NORWAY	RO/RO
MILORA	NORWAY	RO/RO
SEADRAKE	NORWAY	RO/RO
TRICOLOR	NORWAY	RO/RO
HOEGH BISCAY	NORWAY	RO/RO
SEAHORSE	NORWAY	RO/RO
TOURCOING	NORWAY	RO/RO
JOLLY GIALLO	NORWAY	RO/RO
NORWEGIAN CHALLENGER	NORWAY	RO/RO
SAND SHORE	NORWAY	RO/RO
CONCORDIA SUN	NORWAY	CONT SS40
LLOYD BAKKE	NORWAY	CONT SS40
HOEGH MIRANDA	NORWAY	CONT SS40
HOEGH MINERVA	NORWAY	CONT SS40
TAKARA	NORWAY	CONT SS40
SOLDROTT	NORWAY	CONT SS40
SOL TULLA	NORWAY	CONT BB40
MARIE BAKKE	NORWAY	CONT BB40
TORINITA	NORWAY	CAR TRANS.
DYVI KATTEGAT	NORWAY	CAR TRANS.
HOEGH TARGET	NORWAY	CAR TRANS.
LISITA	NORWAY	CAR TRANS.
NOPAL BRANCO	NORWAY	CAR TRANS.
SAINT ROMAIN	NORWAY	CAR TRANS.
ANGELITA	NORWAY	CAR TRANS.
NOPAL MASCOT	NORWAY	CAR TRANS.
NOPAL SEL	NORWAY	CAR TRANS.
SKAUBORD	NORWAY	CAR TRANS.
HOEGH TRIGGER	NORWAY	CAR TRANS.
DYVI PACIFIC	NORWAY	CAR TRANS.
NOPAL VERDE	NORWAY	CAR TRANS.
KARINITA	NORWAY	CAR TRANS.
LAURITA	NORWAY	CAR TRANS.
SKAUGRAN	NORWAY	CAR TRANS.
TOYAMA	NORWAY	CONT NSS40

LLOYD MANHATTAN	NORWAY	CONT BB20
HOEGH CLIPPER	NORWAY	CONT BB20
THOR I	NORWAY	CONT BB20
THORSCAPE	NORWAY	CONT BB20
HOEGH CAIRN	NORWAY	CONT BB20
SAGALAND	NORWAY	CONT BB20
JOHN BAKKE	NORWAY	CONT BB20
CUNENE	PORTUGAL	BREAKBULK
MALANGE	PORTUGAL	BREAKBULK
NOVO REDONDO	PORTUGAL	BREAKBULK
NACALA	PORTUGAL	BREAKBULK
MANICA	PORTUGAL	BREAKBULK
PEREIRA D ECA	PORTUGAL	BREAKBULK
CARVALHO ARAUJO	PORTUGAL	BREAKBULK
SERPA PINTO	PORTUGAL	BREAKBULK
ROCADAS	PORTUGAL	BREAKBULK
BEIRA	PORTUGAL	BREAKBULK
BERNARDINO CORREA	PORTUGAL	BREAKBULK
PORTO	PORTUGAL	BREAKBULK
ALCOUTIM	PORTUGAL	BREAKBULK
H. CAPELO	PORTUGAL	BREAKBULK
DALAMAN	TURKEY	BREAKBULK
GENERAL K ORBAY	TURKEY	BREAKBULK
ARAS	TURKEY	BREAKBULK
GEDIZ	TURKEY	BREAKBULK
FIRAT	TURKEY	BREAKBULK
GENERAL A F CEBESOY	TURKEY	BREAKBULK
AMIRAL S OKAN	TURKEY	BREAKBULK
KOYCEGIZ	TURKEY	BREAKBULK
KEBAN	TURKEY	BREAKBULK
DICLE	TURKEY	BREAKBULK
GENCLIK	TURKEY	BREAKBULK
GENERAL R GUMUSPALA	TURKEY	BREAKBULK
MERIC	TURKEY	BREAKBULK
GENERAL Z DOGAN	TURKEY	BREAKBULK
AMIRAL S ALTICAN	TURKEY	BREAKBULK
SHERBRO	U. KINGDOM	BREAKBULK
KWEICHOW	U. KINGDOM	BREAKBULK
FIRBANK	U. KINGDOM	BREAKBULK
ORDUNA	U. KINGDOM	BREAKBULK
STREAMBANK	U. KINGDOM	BREAKBULK
BENSTAC	U. KINGDOM	BREAKBULK
APAPA PALM	U. KINGDOM	BREAKBULK
LAERTES	U. KINGDOM	BREAKBULK
BOOKER CRUSADE	U. KINGDOM	BREAKBULK
BOOKER COURAGE	U. KINGDOM	BREAKBULK
BOOKER CHALLENGE	U. KINGDOM	BREAKBULK
SEKONDI	U. KINGDOM	BREAKBULK
LANCASHIRE	U. KINGDOM	BREAKBULK
AFRICA PALM	U. KINGDOM	BREAKBULK
LYCAON	U. KINGDOM	BREAKBULK

TEVIOTBAN	U. KINGDOM	BREAKBULK
SHONGA	U. KINGDOM	BREAKBULK
RIVERBANK	U. KINGDOM	BREAKBULK
SAPELE	U. KINGDOM	BREAKBULK
BANBURY	U. KINGDOM	BREAKBULK
IVYBANK	U. KINGDOM	BREAKBULK
PHRONTIS	U. KINGDOM	BREAKBULK
FENBANK	U. KINGDOM	BREAKBULK
CEDARBANK	U. KINGDOM	BREAKBULK
HEREFORDSHIRE	U. KINGDOM	BREAKBULK
ANDES	U. KINGDOM	BREAKBULK
PATROCLUS	U. KINGDOM	BREAKBULK
BENEFACTOR	U. KINGDOM	BREAKBULK
CRESTBANK	U. KINGDOM	BREAKBULK
KWANGSI	U. KINGDOM	BREAKBULK
MERZARIO GRECIA	U. KINGDOM	RO/RO
BARBER PRIAM	U. KINGDOM	RO/RO
STRIDER JUNO	U. KINGDOM	RO/RO
BARBER PERSEUS	U. KINGDOM	RO/RO
STRIDER CRYSTAL	U. KINGDOM	RO/RO
JADE BOUNTY	U. KINGDOM	RO/RO
CONTENDER BEZANT	U. KINGDOM	RO/RO
DILKARA	U. KINGDOM	RO/RO
FORUM NEW ZEALAND	U. KINGDOM	RO/RO
CONTENDER ARGENT	U. KINGDOM	RO/RO
SAPPHIRE BOUNTY	U. KINGDOM	RO/RO
STENA CARRIER	U. KINGDOM	RO/RO
AVON FOREST	U. KINGDOM	CONT+RO/RO
BOXER CAPTAIN COOK	U. KINGDOM	CONT+RO/RO
ATLANTIC CAUSEWAY	U. KINGDOM	CONT+RO/RO
AUSTRALIA STAR	U. KINGDOM	CONT SS40
ADVISER	U. KINGDOM	CONT SS40
NEW ZEALAND CARIBBEAN	U. KINGDOM	CONT SS40
ASTRONOMER	U. KINGDOM	CONT SS40
DUNEDIN	U. KINGDOM	CONT SS40
NEW ZEALAND STAR	U. KINGDOM	CONT SS40
BENARMIN	U. KINGDOM	CONT NSS40
FALMOUNT BAY	U. KINGDOM	CONT NSS40
CALIFORNIA STAR	U. KINGDOM	CONT NSS40
COLUMBIA STAR	U. KINGDOM	CONT NSS40
RHEIN EXPRESS	U. KINGDOM	CONT NSS40
BARBER MEMNON	U. KINGDOM	CONT BB40
BAMENDA PALM	U. KINGDOM	CONT BB40
STUDLAND BAY	U. KINGDOM	CONT BB40
MYRMIDON	U. KINGDOM	CONT BB40
BARBER MENESTHEUS	U. KINGDOM	CONT BB40
SOKOTO	U. KINGDOM	CONT BB40
BARBER MENELAUS	U. KINGDOM	CONT BB40
CITY OF LONDON	U. KINGDOM	CONT BB40
JOSEFA	U. KINGDOM	CONT BB40
WILLOWBANK	U. KINGDOM	CONT BB40
BIBI	U. KINGDOM	CONT BB40
CP DISCOVERER	U. KINGDOM	CONT NSS40
LIVERPOOL BAY	U. KINGDOM	CONT NSS40

ACT 2	U. KINGDOM	CONT NSS40
ARIAKE	U. KINGDOM	CONT NSS40
MANCHESTER RENOWN	U. KINGDOM	CONT NSS40
MANCHESTER CHALLENGE	U. KINGDOM	CONT NSS40
ARAFURA	U. KINGDOM	CONT NSS40
BENALDER	U. KINGDOM	CONT NSS40
KOWLOON BAY	U. KINGDOM	CONT NSS40
ACT 3	U. KINGDOM	CONT NSS40
CP AMBASSADOR	U. KINGDOM	CONT NSS40
AOTEA	U. KINGDOM	CONT NSS40
OSAKA BAY	U. KINGDOM	CONT NSS40
ACT 4	U. KINGDOM	CONT NSS40
MANCHESTER REWARD	U. KINGDOM	CONT NSS40
CARDIGAN BAY	U. KINGDOM	CONT NSS40
MANCHESTER CRUSADE	U. KINGDOM	CONT NSS40
ACT 6	U. KINGDOM	CONT NSS40
CANADIAN EXPLORER	U. KINGDOM	CONT NSS40
ACT 5	U. KINGDOM	CONT NSS40
MORETON BAY	U. KINGDOM	CONT NSS40
REMUERA BAY	U. KINGDOM	CONT NSS40
ACT 7	U. KINGDOM	CONT NSS40
ACT 1	U. KINGDOM	CONT NSS40
TOKYO BAY	U. KINGDOM	CONT NSS40
CP TRADER	U. KINGDOM	CONT NSS40
BOTANY BAY	U. KINGDOM	CONT NSS40
DISCOVERY BAY	U. KINGDOM	CONT NSS40
MAIRANGI BAY	U. KINGDOM	CONT NSS40
CITY OF DURBAN	U. KINGDOM	CONT NSS40
CITY OF EDINBURGH	U. KINGDOM	CONT NSS40
MANCHESTER CONCORDE	U. KINGDOM	CONT NSS40
TABLE BAY	U. KINGDOM	CONT NSS40
BENAVON	U. KINGDOM	CONT NSS40
RESOLUTION BAY	U. KINGDOM	CONT NSS40
ENCOUNTER BAY	U. KINGDOM	CONT NSS40
JERVIS BAY	U. KINGDOM	CONT NSS40
FLINDERS BAY	U. KINGDOM	CONT NSS40
MANCHESTER VANGUARD	U. KINGDOM	CONT NSS40
CP VOYAGEUR	U. KINGDOM	CONT NSS40
STRATHFYNE	U. KINGDOM	CONT BB20
CLYDEBANK	U. KINGDOM	CONT BB20
MEADOWBANK	U. KINGDOM	CONT BB20
MELAMPUS	U. KINGDOM	CONT BB20
OROYA	U. KINGDOM	CONT BB20
FORTHBANK	U. KINGDOM	CONT BB20
STRATHMAY	U. KINGDOM	CONT BB20
STRATHESK	U. KINGDOM	CONT BB20
BADAGRY PALM	U. KINGDOM	CONT BB20
RUDDBANK	U. KINGDOM	CONT BB20
STRATHMUIR	U. KINGDOM	CONT BB20
SILVIA SOFIA	U. KINGDOM	CONT BB20
STRATHEWE	U. KINGDOM	CONT BB20
CORABANK	U. KINGDOM	CONT BB20
DACEBANK	U. KINGDOM	CONT BB20
STRATHELGIN	U. KINGDOM	CONT BB20

MORAYBANK	U. KINGDOM	CONT	BB20
TROUTBANK	U. KINGDOM	CONT	BB20
SOUTHLAND STAR	U. KINGDOM	CONT	BB20
PIKEBANK	U. KINGDOM	CONT	BB20
STRATHMORE	U. KINGDOM	CONT	BB20
WELLINGTON STAR	U. KINGDOM	CONT	BB20
STRATHFIFE	U. KINGDOM	CONT	BB20
STRATHMEIGLE	U. KINGDOM	CONT	BB20
TENCHBANK	U. KINGDOM	CONT	BB20
OROPESA	U. KINGDOM	CONT	BB20
STRATHEDEN	U. KINGDOM	CONT	BB20
STRATHETTRICK	U. KINGDOM	CONT	BB20
ROACHBANK	U. KINGDOM	CONT	BB20
STRATHERROL	U. KINGDOM	CONT	BB20

NATO SHIPS BY SHIP TYPES

SHIP NAME	NATIONALITY	SHIP TYPES
MONSOON	BELGIUM	BREAKBULK
FABIOLAVILLE	BELGIUM	BREAKBULK
MONARCH	BELGIUM	BREAKBULK
MONTENAKEN	BELGIUM	BREAKBULK
RUBENS	BELGIUM	BREAKBULK
MONTAIGLE	BELGIUM	BREAKBULK
MEMLING	BELGIUM	BREAKBULK
MONTSALVA	BELGIUM	BREAKBULK
MONTFORT	BELGIUM	BREAKBULK
DORTE SKOU	DENMARK	BREAKBULK
DIANA SKOU	DENMARK	BREAKBULK
DAGMAR SKOU	DENMARK	BREAKBULK
DINNA SKOU	DENMARK	BREAKBULK
DITTE SKOU	DENMARK	BREAKBULK
STJERNEBORG	DENMARK	BREAKBULK
CHARLOTTENBORG	DENMARK	BREAKBULK
SKODSBORG	DENMARK	BREAKBULK
DOLLY SKOU	DENMARK	BREAKBULK
DORIT SKOU	DENMARK	BREAKBULK
CHRISTIANSBORG	DENMARK	BREAKBULK
LUISE BORNHOFEN	W. GERMANY	BREAKBULK
SLOMAN NAJADE	W. GERMANY	BREAKBULK
UNIDO	W. GERMANY	BREAKBULK
HEIDELBERG	W. GERMANY	BREAKBULK
LINA FISSER	W. GERMANY	BREAKBULK
THURINGIA	W. GERMANY	BREAKBULK
FLAVIA	W. GERMANY	BREAKBULK
KARIN BORNHOFEN	W. GERMANY	BREAKBULK
CAP SAN AUGUSTIN	W. GERMANY	BREAKBULK
NECKAR	W. GERMANY	BREAKBULK
BORUSSIA	W. GERMANY	BREAKBULK
HILDESHEIM	W. GERMANY	BREAKBULK
IBERIA	W. GERMANY	BREAKBULK
CAP SAN MARCO	W. GERMANY	BREAKBULK
MOSEL	W. GERMANY	BREAKBULK
SANTA ELENA	W. GERMANY	BREAKBULK
CAP BRETON	W. GERMANY	BREAKBULK
KRONOS	GREECE	BREAKBULK
KONKAR NEREUS	GREECE	BREAKBULK
MUNSTERLANDES	GREECE	BREAKBULK
HELENA C	GREECE	BREAKBULK
HELLENIC STAR	GREECE	BREAKBULK
ALIKI I P	GREECE	BREAKBULK
PETRADI	GREECE	BREAKBULK
KYRA	GREECE	BREAKBULK
HELLENIC GRACE	GREECE	BREAKBULK
KRITI PEARL	GREECE	BREAKBULK
KONKAR POSEIDON	GREECE	BREAKBULK
ZETTA	GREECE	BREAKBULK
HELLENIC NAVIGATOR	GREECE	BREAKBULK

GORGO	GREECE	BREAKBULK
IASON	GREECE	BREAKBULK
HELLENIC LEADER	GREECE	BREAKBULK
ALIAKMON LEADER	GREECE	BREAKBULK
ERECTHION	GREECE	BREAKBULK
HELLENIC CHALLENGER	GREECE	BREAKBULK
EVGENIA	GREECE	BREAKBULK
LAMBROS TSAGLIOTIS	GREECE	BREAKBULK
HELLENIC SPLENDOR	GREECE	BREAKBULK
AEGIS ATHENIC	GREECE	BREAKBULK
YANNIS	GREECE	BREAKBULK
FAETHON	GREECE	BREAKBULK
AEGIS BRITTANIC	GREECE	BREAKBULK
ANNOULA II	GREECE	BREAKBULK
HELLENIC PRIDE	GREECE	BREAKBULK
THALASSINI KYRA	GREECE	BREAKBULK
MANINA III	GREECE	BREAKBULK
DIMITRIS	GREECE	BREAKBULK
GOOD HERALD	GREECE	BREAKBULK
CAPITAN LUKIS	GREECE	BREAKBULK
ARIADNE	GREECE	BREAKBULK
ATTIKA HOPE	GREECE	BREAKBULK
HELLENIC DESTINY	GREECE	BREAKBULK
HELLENIC IDEAL	GREECE	BREAKBULK
AEGIS HISPANIC	GREECE	BREAKBULK
HELLENIC SEA	GREECE	BREAKBULK
HELLENIC CHAMPION	GREECE	BREAKBULK
AEGIS BALTIC	GREECE	BREAKBULK
ETERNAL PEACE	GREECE	BREAKBULK
HELLENIC SUN	GREECE	BREAKBULK
AEGIS HARMONIC	GREECE	BREAKBULK
HELLENIC PIONEER	GREECE	BREAKBULK
ARGOLIKOS	GREECE	BREAKBULK
AEGIS PRACTIC	GREECE	BREAKBULK
PENELOPE II	GREECE	BREAKBULK
ALHAMBRA	GREECE	BREAKBULK
GRIGORIOS C IV	GREECE	BREAKBULK
HELLENIC SPIRIT	GREECE	BREAKBULK
ATREVIDA	GREECE	BREAKBULK
IRENES LOGIC	GREECE	BREAKBULK
IKTINOS	GREECE	BREAKBULK
ILIOS	GREECE	BREAKBULK
IRENES IDEAL	GREECE	BREAKBULK
ADELFOTIS	GREECE	BREAKBULK
HELLENIC GLORY	GREECE	BREAKBULK
HELLENIC SEAMAN	GREECE	BREAKBULK
ALIAKMON LIGHT	GREECE	BREAKBULK
AEGIS IONIC	GREECE	BREAKBULK
HELLENIC SKY	GREECE	BREAKBULK
FINIX	GREECE	BREAKBULK
HELLENIC WAVE	GREECE	BREAKBULK
HELLENIC PATRIOT	GREECE	BREAKBULK
FEAX	GREECE	BREAKBULK
WISMAR	GREECE	BREAKBULK

HELLENIC HERO	GREECE	BREAKBULK
PIA COSTA	ITALY	BREAKBULK
PUNTA STELLA	ITALY	BREAKBULK
SERENA	ITALY	BREAKBULK
TRIESTE	ITALY	BREAKBULK
PUNTA BIANCA	ITALY	BREAKBULK
PAOLO D'AMICO	ITALY	BREAKBULK
CORTINA	ITALY	BREAKBULK
VILLARPEROSA	ITALY	BREAKBULK
GAZZELLA	ITALY	BREAKBULK
AURELIA DI MAIO	ITALY	BREAKBULK
ESQUILINO	ITALY	BREAKBULK
NAI MONREALE	ITALY	BREAKBULK
CAPO SAN MARCO	ITALY	BREAKBULK
LUIGI ORLANDO	ITALY	BREAKBULK
TIGRE	ITALY	BREAKBULK
CESARE D'AMICO	ITALY	BREAKBULK
CARLOTTA F.	ITALY	BREAKBULK
GIOACCHINO LAURO	ITALY	BREAKBULK
LUIGI D'AMICO	ITALY	BREAKBULK
NEDLLOYD MADISON	NETHERLAND	BREAKBULK
NEDLLOYD RHONE	NETHERLAND	BREAKBULK
NEDLLOYD FLEVOLAND	NETHERLAND	BREAKBULK
NEDLLOYD STREEFKERK	NETHERLAND	BREAKBULK
NEDLLOYD NASSAU	NETHERLAND	BREAKBULK
ALUDRA	NETHERLAND	BREAKBULK
NEDLLOYD WILLEMSKERK	NETHERLAND	BREAKBULK
NEDLLOYD HOBART	NETHERLAND	BREAKBULK
NEDLLOYD SPAARNEKERK	NETHERLAND	BREAKBULK
DOCK EXPRESS 12	NETHERLAND	BREAKBULK
NEDLLOYD AMSTELLAND	NETHERLAND	BREAKBULK
NEDLLOYD FRANKLIN	NETHERLAND	BREAKBULK
ALHENA	NETHERLAND	BREAKBULK
NEDLLOYD SCHELDE	NETHERLAND	BREAKBULK
EEMHAVEN	NETHERLAND	BREAKBULK
NEDLLOYD FREMANTLE	NETHERLAND	BREAKBULK
NEDLLOYD WESER	NETHERLAND	BREAKBULK
NEDLLOYD LOIRE	NETHERLAND	BREAKBULK
WILLEMSTAD	NETHERLAND	BREAKBULK
NEDLLOYD FREETOWN	NETHERLAND	BREAKBULK
NEDLLOYD STEENKERK	NETHERLAND	BREAKBULK
NEDLLOYD KINGSTON	NETHERLAND	BREAKBULK
NEDLLOYD NAPIER	NETHERLAND	BREAKBULK
NEDLLOYD WESTERKERK	NETHERLAND	BREAKBULK
NEDLLOYD HONGKONG	NETHERLAND	BREAKBULK
NEDLLOYD SINOUTSKERK	NETHERLAND	BREAKBULK
NEDLLOYD ADELAIDE	NETHERLAND	BREAKBULK
NEDLLOYD KATWIJK	NETHERLAND	BREAKBULK
NEDLLOYD FRAZER	NETHERLAND	BREAKBULK
NEDLLOYD SCHIE	NETHERLAND	BREAKBULK
NEDLLOYD AMSTERDAM	NETHERLAND	BREAKBULK
NEDLLOYD KOBE	NETHERLAND	BREAKBULK
NEDLLOYD KYOTO	NETHERLAND	BREAKBULK
NEDLLOYD SALLAND	NETHERLAND	BREAKBULK

NEDLLOYD NAGASAKI	NETHERLAND	BREAKBULK
DOCK EXPRESS 10	NETHERLAND	BREAKBULK
NEDLLOYD KOREA	NETHERLAND	BREAKBULK
NEDLLOYD LEUVE	NETHERLAND	BREAKBULK
NEDLLOYD KIMBERLEY	NETHERLAND	BREAKBULK
NEDLLOYD LINGE	NETHERLAND	BREAKBULK
NEDLLOYD ORANJESTAD	NETHERLAND	BREAKBULK
THAMESHAVEN	NETHERLAND	BREAKBULK
NEDLLOYD FORCADOS	NETHERLAND	BREAKBULK
NEDLLOYD WISSEKERK	NETHERLAND	BREAKBULK
NEDLLOYD HONSHU	NETHERLAND	BREAKBULK
NEDLLOYD KEMBLA	NETHERLAND	BREAKBULK
NEDLLOYD MAIN	NETHERLAND	BREAKBULK
NEDLLOYD NAGOYA	NETHERLAND	BREAKBULK
DOCK EXPRESS 11	NETHERLAND	BREAKBULK
NEDLLOYD HOLLAND	NETHERLAND	BREAKBULK
NEDLLOYD WAALEKERK	NETHERLAND	BREAKBULK
RAGNA BAKKE	NORWAY	BREAKBULK
BARBER TERRIER	NORWAY	BREAKBULK
TYSLA	NORWAY	BREAKBULK
BARBER TALISMAN	NORWAY	BREAKBULK
MARTHA BAKKE	NORWAY	BREAKBULK
BAVANG	NORWAY	BREAKBULK
ANNA PRESTHUS	NORWAY	BREAKBULK
THORSWAVE	NORWAY	BREAKBULK
HOEGH PILOT	NORWAY	BREAKBULK
BARBER TENNESSEE	NORWAY	BREAKBULK
HOEGH ORRIS	NORWAY	BREAKBULK
WILNINA	NORWAY	BREAKBULK
MILENA	NORWAY	BREAKBULK
CONCORDIA STAR	NORWAY	BREAKBULK
BARBER TSU	NORWAY	BREAKBULK
WILMONA	NORWAY	BREAKBULK
HOEGH ORCHID	NORWAY	BREAKBULK
FOSSUM	NORWAY	BREAKBULK
HOEGH OPAL	NORWAY	BREAKBULK
BARBER THERMOPYLAE	NORWAY	BREAKBULK
TAIKO	NORWAY	BREAKBULK
H. CAPELO	PORTUGAL	BREAKBULK
ALCOUTIM	PORTUGAL	BREAKBULK
PORTO	PORTUGAL	BREAKBULK
BERNARDINO CORREA	PORTUGAL	BREAKBULK
CUNENE	PORTUGAL	BREAKBULK
MALANGE	PORTUGAL	BREAKBULK
NOVO REDONDO	PORTUGAL	BREAKBULK
NACALA	PORTUGAL	BREAKBULK
BEIRA	PORTUGAL	BREAKBULK
ROCADAS	PORTUGAL	BREAKBULK
SERPA PINTO	PORTUGAL	BREAKBULK
MANICA	PORTUGAL	BREAKBULK
PEREIRA D ECA	PORTUGAL	BREAKBULK
CARVALHO ARAUJO	PORTUGAL	BREAKBULK
DICLE	TURKEY	BREAKBULK
AMIRAL S ALTICAN	TURKEY	BREAKBULK

MERIC	TURKEY	BREAKBULK
GENERAL Z DOGAN	TURKEY	BREAKBULK
GENCLIK	TURKEY	BREAKBULK
GENERAL R GUMUSPALA	TURKEY	BREAKBULK
FIRAT	TURKEY	BREAKBULK
KEBAN	TURKEY	BREAKBULK
GENERAL A F CEBESOY	TURKEY	BREAKBULK
AMIRAL S OKAN	TURKEY	BREAKBULK
KOYCEGIZ	TURKEY	BREAKBULK
DALAMAN	TURKEY	BREAKBULK
GENERAL K ORBAY	TURKEY	BREAKBULK
GEDIZ	TURKEY	BREAKBULK
ARAS	TURKEY	BREAKBULK
HEREFORDSHIRE	U. KINGDOM	BREAKBULK
ANDES	U. KINGDOM	BREAKBULK
PATROCLUS	U. KINGDOM	BREAKBULK
BENEFACTOR	U. KINGDOM	BREAKBULK
KWANGSI	U. KINGDOM	BREAKBULK
CRESTBANK	U. KINGDOM	BREAKBULK
SAPELE	U. KINGDOM	BREAKBULK
BANBURY	U. KINGDOM	BREAKBULK
IVYBANK	U. KINGDOM	BREAKBULK
PHRONTIS	U. KINGDOM	BREAKBULK
FENBANK	U. KINGDOM	BREAKBULK
CEDARBANK	U. KINGDOM	BREAKBULK
FIRBANK	U. KINGDOM	BREAKBULK
ORDUNA	U. KINGDOM	BREAKBULK
STREAMBANK	U. KINGDOM	BREAKBULK
BENSTAC	U. KINGDOM	BREAKBULK
APAPA PALM	U. KINGDOM	BREAKBULK
KWEICHOW	U. KINGDOM	BREAKBULK
SHERBRO	U. KINGDOM	BREAKBULK
LAERTES	U. KINGDOM	BREAKBULK
BOOKER CRUSADE	U. KINGDOM	BREAKBULK
BOOKER COURAGE	U. KINGDOM	BREAKBULK
BOOKER CHALLENGE	U. KINGDOM	BREAKBULK
SEKONDI	U. KINGDOM	BREAKBULK
LANCASHIRE	U. KINGDOM	BREAKBULK
LYCAON	U. KINGDOM	BREAKBULK
AFRICA PALM	U. KINGDOM	BREAKBULK
SHONGA	U. KINGDOM	BREAKBULK
TEVIOTBAN	U. KINGDOM	BREAKBULK
RIVERBANK	U. KINGDOM	BREAKBULK
DANA FUTURA	DENMARK	RO/RO
DANA MAXIMA	DENMARK	RO/RO
DANA HAFNIA	DENMARK	RO/RO
TRANSGERMANIA	W. GERMANY	RO/RO
LILLOOET	W. GERMANY	RO/RO
RADBOD	W. GERMANY	RO/RO
RAILSHIP I	W. GERMANY	RO/RO
TRANSFINLANDIA	W. GERMANY	RO/RO
KONGSFJORD	W. GERMANY	RO/RO
ARGO	W. GERMANY	RO/RO

NESTOR	W. GERMANY	RO/RO
PROJECT AMERICAS	W. GERMANY	RO/RO
HELLENIC INNOVATOR	GREECE	RO/RO
SEASPEED AMERICA	GREECE	RO/RO
SYRIA	GREECE	RO/RO
HELLENIC VALOR	GREECE	RO/RO
CONSTELLATION ENTERPRISE	GREECE	RO/RO
HELLENIC EXPLORER	GREECE	RO/RO
HELLAS	GREECE	RO/RO
COMANDANTE REVELLO	ITALY	RO/RO
NEDLLOYD ROSARIO	NETHERLAND	RO/RO
NEDLLOYD ROUEN	NETHERLAND	RO/RO
NEDLLOYD ROCHESTER	NETHERLAND	RO/RO
NEDLLOYD ROCKANJE	NETHERLAND	RO/RO
NEDLLOYD ROTTERDAM	NETHERLAND	RO/RO
SAND SHORE	NORWAY	RO/RO
NORWEGIAN CHALLENGER	NORWAY	RO/RO
JOLLY GIALLO	NORWAY	RO/RO
TOURCOING	NORWAY	RO/RO
SEAHORSE	NORWAY	RO/RO
HOEGH BISCAY	NORWAY	RO/RO
TRICOLOR	NORWAY	RO/RO
BARBER TOBA	NORWAY	RO/RO
JOLLY BRUNO	NORWAY	RO/RO
BARBER TONSBERG	NORWAY	RO/RO
SEADRAKE	NORWAY	RO/RO
MILORA	NORWAY	RO/RO
BARBER TAIF	NORWAY	RO/RO
STRIDER CRYSTAL	U. KINGDOM	RO/RO
BARBER PERSEUS	U. KINGDOM	RO/RO
MERZARIO GRECIA	U. KINGDOM	RO/RO
BARBER PRIAM	U. KINGDOM	RO/RO
STRIDER JUNO	U. KINGDOM	RO/RO
CONTENDER BEZANT	U. KINGDOM	RO/RO
JADE BOUNTY	U. KINGDOM	RO/RO
DILKARA	U. KINGDOM	RO/RO
STENA CARRIER	U. KINGDOM	RO/RO
SAPPHIRE BOUNTY	U. KINGDOM	RO/RO
FORUM NEW ZEALAND	U. KINGDOM	RO/RO
CONTENDER ARGENT	U. KINGDOM	RO/RO

LEVANTE EXPRESS	ITALY	CONT+RO/RO
ANDREA MERZARIO	ITALY	CONT+RO/RO
FENICIA EXPRESS	ITALY	CONT+RO/RO
ATLANTIC CROWN	NETHERLAND	CONT+RO/RO
ATLANTIC STAR	NETHERLAND	CONT+RO/RO
AVON FOREST	U. KINGDOM	CONT+RO/RO
ATLANTIC CAUSEWAY	U. KINGDOM	CONT+RO/RO
BOXER CAPTAIN COOK	U. KINGDOM	CONT+RO/RO

CHRISTIAN MAERSK	DENMARK	CONT SS40
CHARLOTTE MAERSK	DENMARK	CONT SS40
CHASTINE MAERSK	DENMARK	CONT SS40
CORNELIA MAERSK	DENMARK	CONT SS40

CECILIE MAERSK	DENMARK	CONT	SS40
CLARA MAERSK	DENMARK	CONT	SS40
CALEDONIA	W. GERMANY	CONT	SS40
MONTE OLIVIA	W. GERMANY	CONT	SS40
COLUMBUS LOUISIANA	W. GERMANY	CONT	SS40
MONTE ROSA	W. GERMANY	CONT	SS40
COLUMBIA	W. GERMANY	CONT	SS40
CITY OF LIVERPOOL	W. GERMANY	CONT	SS40
CARIBIA EXPRESS	W. GERMANY	CONT	SS40
MONTE SARMIENTO	W. GERMANY	CONT	SS40
CALIFORNIA	W. GERMANY	CONT	SS40
URUNDI	W. GERMANY	CONT	SS40
COLUMBUS CANTERBURY	W. GERMANY	CONT	SS40
ULANGA	W. GERMANY	CONT	SS40
KATJANA	W. GERMANY	CONT	SS40
USAMBARA	W. GERMANY	CONT	SS40
CORDILLERA EXPRESS	W. GERMANY	CONT	SS40
PAMINA	W. GERMANY	CONT	SS40
PALOMA	W. GERMANY	CONT	SS40
PANCALDO	ITALY	CONT	SS40
DA MOSTO	ITALY	CONT	SS40
D ALBERTIS	ITALY	CONT	SS40
MOORDRECHT	NETHERLAND	CONT	SS40
MIJDRECHT	NETHERLAND	CONT	SS40
IBN ATIK	NETHERLAND	CONT	SS40
SOLDROTT	NORWAY	CONT	SS40
TAKARA	NORWAY	CONT	SS40
HOEGH MINERVA	NORWAY	CONT	SS40
LLOYD BAKKE	NORWAY	CONT	SS40
HOEGH MIRANDA	NORWAY	CONT	SS40
CONCORDIA SUN	NORWAY	CONT	SS40
NEW ZEALAND STAR	U. KINGDOM	CONT	SS40
DUNEDIN	U. KINGDOM	CONT	SS40
ADVISER	U. KINGDOM	CONT	SS40
NEW ZEALAND CARIBBEAN	U. KINGDOM	CONT	SS40
AUSTRALIA STAR	U. KINGDOM	CONT	SS40
ASTRONOMER	U. KINGDOM	CONT	SS40
PLANTIN	BELGIUM	CONT	NSS40
DART CONTINENT	BELGIUM	CONT	NSS40
LEISE MAERSK	DENMARK	CONT	NSS40
DRAGOR MAERSK	DENMARK	CONT	NSS40
SUMBAWA	DENMARK	CONT	NSS40
LICA MAERSK	DENMARK	CONT	NSS40
FIONIA	DENMARK	CONT	NSS40
LEXA MAERSK	DENMARK	CONT	NSS40
LAURA MAERSK	DENMARK	CONT	NSS40
ERLANGEN EXPRESS	W. GERMANY	CONT	NSS40
ALEMANNIA EXPRESS	W. GERMANY	CONT	NSS40
NURNBERG EXPRESS	W. GERMANY	CONT	NSS40
HAMBURG EXPRESS	W. GERMANY	CONT	NSS40
HELLENIC FAITH	GREECE	CONT	NSS40
HELLENIC ADVENTURE	GREECE	CONT	NSS40
HELLENIC FRIENDSHIP	GREECE	CONT	NSS40

AFRICA	ITALY	CONT NSS40
EUROPA	ITALY	CONT NSS40
WATERGEUS	NETHERLAND	CONT NSS40
MOUNTS BAY	NETHERLAND	CONT NSS40
BENATTOW	NETHERLAND	CONT NSS40
RHEIN EXPRESS	U. KINGDOM	CONT NSS40
FALMOUNT BAY	U. KINGDOM	CONT NSS40
BENARMIN	U. KINGDOM	CONT NSS40
COLUMBIA STAR	U. KINGDOM	CONT NSS40
CALIFORNIA STAR	U. KINGDOM	CONT NSS40

BACO-LINER 1	W. GERMANY	BARGE TRAN
BACO-LINER 2	W. GERMANY	BARGE TRAN
BILDERDYK	NETHERLAND	BARGE TRAN

E.R. BRUSSEL	BELGIUM	CONT BB40
E. R. BRUGGE	BELGIUM	CONT BB40
MCKINNEY MAERSK	DENMARK	CONT BB40
MARCHEN MAERSK	DENMARK	CONT BB40
MARGRETHE MAERSK	DENMARK	CONT BB40
MATHILDE MAERSK	DENMARK	CONT BB40
HOLSTENTRADER	W. GERMANY	CONT BB40
STUBBENHUK	W. GERMANY	CONT BB40
HOLSTENCRUISER	W. GERMANY	CONT BB40
CAROLINA	W. GERMANY	CONT BB40
CHARLOTTA	W. GERMANY	CONT BB40
CHRISTIAN WESCH	W. GERMANY	CONT BB40
HOLSTENSAILOR	W. GERMANY	CONT BB40
E.L.M.A. DOS	W. GERMANY	CONT BB40
RENEE RICKMERS	W. GERMANY	CONT BB40
STEINHOEFT	W. GERMANY	CONT BB40
BERTRAM RICKMERS	W. GERMANY	CONT BB40
HEIDENHEIM	W. GERMANY	CONT BB40
SANDRA WESCH	W. GERMANY	CONT BB40
HOLSTENRACER	W. GERMANY	CONT BB40
FRIESENSTEIN	W. GERMANY	CONT BB40
EGIZIA	ITALY	CONT BB40
SAFOCEAN MILDURA	NETHERLAND	CONT BB40
MARIE BAKKE	NORWAY	CONT BB40
SOL TULLA	NORWAY	CONT BB40
SOKOTO	U. KINGDOM	CONT BB40
BARBER MENELAUS	U. KINGDOM	CONT BB40
MYRMIDON	U. KINGDOM	CONT BB40
BARBER MENESTHEUS	U. KINGDOM	CONT BB40
BAMENDA PALM	U. KINGDOM	CONT BB40
STUDLAND BAY	U. KINGDOM	CONT BB40
BARBER MEMNON	U. KINGDOM	CONT BB40
CITY OF LONDON	U. KINGDOM	CONT BB40
JOSEFA	U. KINGDOM	CONT BB40
WILLOWBANK	U. KINGDOM	CONT BB40
BIBI	U. KINGDOM	CONT BB40

HOEGH TRIGGER	NORWAY	CAR TRANS.
DYVI PACIFIC	NORWAY	CAR TRANS.

SKAUBORD	NORWAY	CAR TRANS.
NOPAL SEL	NORWAY	CAR TRANS.
NOPAL MASCOT	NORWAY	CAR TRANS.
NOPAL VERDE	NORWAY	CAR TRANS.
KARINITA	NORWAY	CAR TRANS.
LAURITA	NORWAY	CAR TRANS.
SKAUGRAN	NORWAY	CAR TRANS.
ANGELITA	NORWAY	CAR TRANS.
SAINT ROMAIN	NORWAY	CAR TRANS.
TORINITA	NORWAY	CAR TRANS.
DYVI KATTEGAT	NORWAY	CAR TRANS.
HOEGH TARGET	NORWAY	CAR TRANS.
NOPAL BRANCO	NORWAY	CAR TRANS.
LISITA	NORWAY	CAR TRANS.
MERCATOR	BELGIUM	CONT NSS40
ORTELIUS	BELGIUM	CONT NSS40
DART EUROPE	BELGIUM	CONT NSS40
SELANDIA	DENMARK	CONT NSS40
ARILD MAERSK	DENMARK	CONT NSS40
ANNA MAERSK	DENMARK	CONT NSS40
ALBERT MAERSK	DENMARK	CONT NSS40
BORINGIA	DENMARK	CONT NSS40
JUTLANDIA	DENMARK	CONT NSS40
AXEL MAERSK	DENMARK	CONT NSS40
ARNOLD MAERSK	DENMARK	CONT NSS40
ALVA MAERSK	DENMARK	CONT NSS40
MEONIA	DENMARK	CONT NSS40
SONGKHLA	DENMARK	CONT NSS40
ADRIAN MAERSK	DENMARK	CONT NSS40
CLIFFORD MAERSK	DENMARK	CONT NSS40
ARTHUR MAERSK	DENMARK	CONT NSS40
ANDERS MAERSK	DENMARK	CONT NSS40
FALSTRIA	DENMARK	CONT NSS40
SYDNEY EXPRESS	W. GERMANY	CONT NSS40
COLUMBUS AUSTRALIA	W. GERMANY	CONT NSS40
MELBOURNE EXPRESS	W. GERMANY	CONT NSS40
COLUMBUS AMERICA	W. GERMANY	CONT NSS40
COLUMBUS QUEENSLAND	W. GERMANY	CONT NSS40
BREMEN EXPRESS	W. GERMANY	CONT NSS40
AMERICA EXPRESS	W. GERMANY	CONT NSS40
STUTTGART EXPRESS	W. GERMANY	CONT NSS40
TOKIO EXPRESS	W. GERMANY	CONT NSS40
LUDWIGSHAFEN EXPRESS	W. GERMANY	CONT NSS40
HONGKONG EXPRESS	W. GERMANY	CONT NSS40
KOELN EXPRESS	W. GERMANY	CONT NSS40
COLUMBUS VICTORIA	W. GERMANY	CONT NSS40
LEVERKUSEN EXPRESS	W. GERMANY	CONT NSS40
DUSSELDORF EXPRESS	W. GERMANY	CONT NSS40
COLUMBUS NEW ZEALAND	W. GERMANY	CONT NSS40
HOECHST EXPRESS	W. GERMANY	CONT NSS40
PELAGOS	GREECE	CONT NSS40
ANEMOS	GREECE	CONT NSS40
ACADIA	ITALY	CONT NSS40

NIPPONICA	ITALY	CONT NSS40
AMERICANA	ITALY	CONT NSS40
LLOYDIANA	ITALY	CONT NSS40
MEDITERRANEA	ITALY	CONT NSS40
ITALICA	ITALY	CONT NSS40
INCOTRANS SPIRIT	NETHERLAND	CONT NSS40
NEDLLOYD HOORN	NETHERLAND	CONT NSS40
NEDLLOYD HOLLANDIA	NETHERLAND	CONT NSS40
NEDLLOYD DELFT	NETHERLAND	CONT NSS40
INCOTRANS SPEED	NETHERLAND	CONT NSS40
LARGS BAY	NETHERLAND	CONT NSS40
NEDLLOYD DEJIMA	NETHERLAND	CONT NSS40
TOYAMA	NORWAY	CONT NSS40
ACT 7	U. KINGDOM	CONT NSS40
ACT 1	U. KINGDOM	CONT NSS40
REMUERA BAY	U. KINGDOM	CONT NSS40
CP TRADER	U. KINGDOM	CONT NSS40
TOKYO BAY	U. KINGDOM	CONT NSS40
MANCHESTER CONCORDE	U. KINGDOM	CONT NSS40
TABLE BAY	U. KINGDOM	CONT NSS40
DISCOVERY BAY	U. KINGDOM	CONT NSS40
BOTANY BAY	U. KINGDOM	CONT NSS40
MAIRANGI BAY	U. KINGDOM	CONT NSS40
CITY OF DURBAN	U. KINGDOM	CONT NSS40
CITY OF EDINBURGH	U. KINGDOM	CONT NSS40
RESOLUTION BAY	U. KINGDOM	CONT NSS40
ENCOUNTER BAY	U. KINGDOM	CONT NSS40
JERVIS BAY	U. KINGDOM	CONT NSS40
FLINDERS BAY	U. KINGDOM	CONT NSS40
BENAVON	U. KINGDOM	CONT NSS40
MANCHESTER VANGUARD	U. KINGDOM	CONT NSS40
CP VOYAGEUR	U. KINGDOM	CONT NSS40
MORETON BAY	U. KINGDOM	CONT NSS40
ACT 2	U. KINGDOM	CONT NSS40
ARIAKE	U. KINGDOM	CONT NSS40
MANCHESTER RENOWN	U. KINGDOM	CONT NSS40
LIVERPOOL BAY	U. KINGDOM	CONT NSS40
CP DISCOVERER	U. KINGDOM	CONT NSS40
ACT 3	U. KINGDOM	CONT NSS40
CP AMBASSADOR	U. KINGDOM	CONT NSS40
AOTEA	U. KINGDOM	CONT NSS40
OSAKA BAY	U. KINGDOM	CONT NSS40
CARDIGAN BAY	U. KINGDOM	CONT NSS40
MANCHESTER REWARD	U. KINGDOM	CONT NSS40
ACT 4	U. KINGDOM	CONT NSS40
BENALDER	U. KINGDOM	CONT NSS40
KOWLOON BAY	U. KINGDOM	CONT NSS40
ARAFURA	U. KINGDOM	CONT NSS40
MANCHESTER CHALLENGE	U. KINGDOM	CONT NSS40
ACT 6	U. KINGDOM	CONT NSS40
MANCHESTER CRUSADE	U. KINGDOM	CONT NSS40
CANADIAN EXPLORER	U. KINGDOM	CONT NSS40
ACT 5	U. KINGDOM	CONT NSS40

QUELLIN	BELGIUM	CONT	BB20
VAN DYCK	BELGIUM	CONT	BB20
SIMBA	DENMARK	CONT	BB20
SAMOA	DENMARK	CONT	BB20
SINALOA	DENMARK	CONT	BB20
SIENA	DENMARK	CONT	BB20
SARGODHA	DENMARK	CONT	BB20
ELBE	W. GERMANY	CONT	BB20
RUSSELSHEIM	W. GERMANY	CONT	BB20
SLOMAN NEREUS	W. GERMANY	CONT	BB20
TABORA	W. GERMANY	CONT	BB20
SLOMAN MIRA	W. GERMANY	CONT	BB20
UNTERTURKHEIM	W. GERMANY	CONT	BB20
AMADO	W. GERMANY	CONT	BB20
INGELHEIM	W. GERMANY	CONT	BB20
RUDESHEIM	W. GERMANY	CONT	BB20
SLOMAN MERCUR	W. GERMANY	CONT	BB20
HOLSTENSTEIN	W. GERMANY	CONT	BB20
FANEOS	GREECE	CONT	BB20
NEDLLOYD FRESCO	NETHERLAND	CONT	BB20
ALNATI	NETHERLAND	CONT	BB20
NEDLLOYD BAHRAIN	NETHERLAND	CONT	BB20
NEDLLOYD BARCELONA	NETHERLAND	CONT	BB20
NEDLLOYD BANGKOK	NETHERLAND	CONT	BB20
ALPHACCA	NETHERLAND	CONT	BB20
NEDLLOYD BALTIMORE	NETHERLAND	CONT	BB20
NEDLLOYD BAARN	NETHERLAND	CONT	BB20
NEDLLOYD BREDA	NETHERLAND	CONT	BB20
NEDLLOYD ALKMAAR	NETHERLAND	CONT	BB20
ALDABI	NETHERLAND	CONT	BB20
NEDLLOYD AMERSFOORT	NETHERLAND	CONT	BB20
HOEGH CLIPPER	NORWAY	CONT	BB20
LLOYD MANHATTAN	NORWAY	CONT	BB20
THOR I	NORWAY	CONT	BB20
THORSCAPE	NORWAY	CONT	BB20
HOEGH CAIRN	NORWAY	CONT	BB20
SAGALAND	NORWAY	CONT	BB20
JOHN BAKKE	NORWAY	CONT	BB20
STRATHETTRICK	U. KINGDOM	CONT	BB20
TENCHBANK	U. KINGDOM	CONT	BB20
STRATHEDEN	U. KINGDOM	CONT	BB20
OROPESA	U. KINGDOM	CONT	BB20
ROACHBANK	U. KINGDOM	CONT	BB20
STRATHERROL	U. KINGDOM	CONT	BB20
PIKEBANK	U. KINGDOM	CONT	BB20
STRATHMORE	U. KINGDOM	CONT	BB20
STRATHFIFE	U. KINGDOM	CONT	BB20
STRATHMEIGLE	U. KINGDOM	CONT	BB20
WELLINGTON STAR	U. KINGDOM	CONT	BB20
MORAYBANK	U. KINGDOM	CONT	BB20
TROUTBANK	U. KINGDOM	CONT	BB20
SOUTHLAND STAR	U. KINGDOM	CONT	BB20
STRATHELGIN	U. KINGDOM	CONT	BB20
STRATHEWE	U. KINGDOM	CONT	BB20

SILVIA SOFIA	U. KINGDOM	CONT	BB20
DACEBANK	U. KINGDOM	CONT	BB20
CORABANK	U. KINGDOM	CONT	BB20
STRATHMUIR	U. KINGDOM	CONT	BB20
RUDDBANK	U. KINGDOM	CONT	BB20
STRATHESK	U. KINGDOM	CONT	BB20
BADAGRY PALM	U. KINGDOM	CONT	BB20
STRATHMAY	U. KINGDOM	CONT	BB20
FORTHBANK	U. KINGDOM	CONT	BB20
MELAMPUS	U. KINGDOM	CONT	BB20
OROYA	U. KINGDOM	CONT	BB20
STRATHFYNE	U. KINGDOM	CONT	BB20
CLYDEBANK	U. KINGDOM	CONT	BB20
MEADOWBANK	U. KINGDOM	CONT	BB20

The ships held in the RRF have been designated into 5, 10, and 20 day readiness groups depending on the Navy's planned activation time for each ship. These ships are currently concentrated in three holding centers on the East, Gulf, and West Coasts. There is some concern over the ability of these ships to meet their readiness deadlines, particularly the 5-day ships. Factors affecting this ability include towing time, shipyard capabilities and general ship condition. Two approaches identified by the Navy to enhance the readiness ability of these ships include assigning maintenance of these ships to general agents and outporting some ships to auxiliary locations closer to the shipyard that will prepare the ships for service.

QUESTION: How does the Navy expect these options to improve the readiness status of the RRF?

ANSWER: The assignment of a general agent for each ship in the Ready Reserve Force, engaged in an active role in the retention, maintenance and periodic activation of the ships is expected to provide greater familiarity with each ship, a "day-to-day" maintenance program and overall improved readiness. The currently assigned MARAD work force is limited in size and currently relies heavily on outside commercial sources for maintenance requirements during periodic inspections and certifications. The rapid growth in RRF size over the past several years has necessarily relegated the MARAD work force to a caretaker status.

QUESTION: How does the Navy plan to classify ships for general agent maintenance or out-porting?

ANSWER: Outporting of all RRF-5 and some selected RRF-10 ships away from the concentrated fleet anchorages will ensure the readiness of these ships at time of activation. Continued location of RRF ships in the three designated fleet anchorages currently overtaxes the industrial facilities in these three sites to activate the expanding number of ships in the RRF. Lengthy tows from these sites to distant activation facilities would be self-defeating and severely constrain the number of ships immediately available to meet initial deployment sealift requirements. Outporting of a percentage of high readiness ships at or in close proximity to activation facilities will greatly enhance the responsiveness of this vital sealift asset.

QUESTION: What is the overall cost impact of these programs?

ANSWER: It is anticipated that the overall cost of the program will increase as a result of the initiatives described above as compared to the relatively low cost per ship experienced two to three years ago.

QUESTION: To what extent will these options be utilized as the Navy increases the size of the RRF?

ANSWER: As previously stated, each RRF ship will be assigned a general agent; however, only appproximately 40 ships will require outporting.

SEALIFT TYPE SHIPS

The Navy has identified several types of ships as candidates for inclusion into the RRF. These ship types include RO/RO's heavylift, containerships, tankers and breakbulk. The Navy's requirements for these ships include direct cargo transport, fleet support ships, crane ships, aviation support ships, and ships with training responsibilities.

QUESTION: Given the Navy's prior experiences and projectable future sealift requirements, how does the Navy select the types of ships for the RRF.?

ANSWER: The Navy's selection of type of ships for the RRF has been based on an analysis of the types of combat unit equipment expected to be deployed in the early stages of conflict. This analysis was conducted during the 1984 DOD Sealift Study and included both Army and USMC requirements. The selection has also considered the numbers of specific type ships currently in existence and potentially available. From this a planning goal for the RRF by type of ship has been developed.

QUESTION: Describe the Navy's contingency plans associating each ship or type of ship to a specific unit or lift mission. How are Army lift needs included in the Navy's plans?

ANSWER: The sealift study analysis included the individual Army or Marine Corps units, their location as well as unit primary and secondary loadout ports by coast and region.

QUESTION: How are the locations of various ship types keyed to specific local lift needs?

ANSWER: RRF assets have been apportioned to coast assignments based on a percentage of the initial cargo buildup experienced on that coast. Further apportionment by ship type has been made to achieve a balance of overall sealift assets based on demand.

QUESTION: Given the various types of ships in the RRF and the Navy's limited experience in activating most of them, how does the Navy assure that it can activate any type of ship within the stipulated deadline?

ANSWER: Until recently the only type ship in the RRF has been the breakbulk. As different type ships are acquired and placed in retention status, each type will be activated and employed in exercise lifts to validate activation specifications and plans.

MARKET AVAILABILITY

The Navy has identified exceptional market conditions that make the purchase of these ships an inexpensive means to augment the sealift capability of U.S. forces. Navy officials have suggested that failure to obtain and hold these ships for fleet service would be an irreplaceable loss to U.S. interests as these ships are likely to be sold as scrap or to foreign flag carriers if not purchased by the Navy.

QUESTION: How does the Navy ensure that the ships will be acquired at the lowest possible price?

ANSWER: Ship acquisitions are conducted on a competitive basis. Evaluation criteria considers the offered price of the ships as well as the military utility of each type of ship to arrive at the best, most economical purchase.

QUESTION: What industry sources does the Navy consult to determine the estimated market value of these ships?

ANSWER: No industry sources have been consulted by Navy to determine the market value of a ship offered. Navy has relied on the competitive process to establish the fair market value of ships offered and reserves the right to reject offers that are considered above a fair and reasonable price.

QUESTION: Since the Navy is now buying ships from foreign sources for the RRF as opposed to prior policies of only buying American flag ships which were going out of service, is the Navy still concerned that "irreplaceable loss" is still a factor influencing determination of types of ships to buy? Explain.

ANSWER: "Irreplaceable loss" is still a concern in assessing the overall strategic sealift capability of the nation but has not been an over-riding factor in the determination of the type of ships to buy. Acquisition of ships from foreign flag carriers is only applicable to Roll-on/Roll-off ships and heavy lift ships. Because there are so few of these highly militarily useful ships in the U. S. flag fleet inventory, it has been necessary to also seek offers from foreign sources.

TAO FLEET OILERS

QUESTION: In fiscal year 1985, two T-AOs were recommended by authorization as part of a second source effort to develop competition in production of these ships. The Navy has identified this program as a top priority and an area of current fleet shortfall. It initially planned contract award in November 1984, subsequently revised that date to March 1985 due to administrative delays, but still has not yet made an award. Given the priority of this program, the experience the Navy has gained in the construction of the first ships, and the financial advantages of early contract award, why has the Navy delayed by over 5 months the award for this contract?

ANSWER: The procurement regulations applicable to an acquisition of this magnitude and complexity demand careful consideration of many factors before an award can be made. Best and Final offers for the FY85 T-AO Fleet Oilers are under consideration at this time.

QUESTION: When does the Navy expect contract award?

ANSWER: As mentioned above, Best and Final offers for the FY85 T-AO Fleet Oilers are under consideration at this time. We expect contract award to be made in May 1985.

AO-177 FLEET OILER JUMBOIZATION

The Congress, the GAO, and independent navy contractors have all advocated the expansion of the AO-177 class fleet oilers from their current 120,000 bbl to a 180,000 bbls POL capacity. This would correct an acknowledged inadequacy in the AO-177's carrying capacity as well as permit the Navy to reduce the new T-AO fleet oiler program size by 2 ships. This Committee recommended and the Congress agreed that savings from the fiscal year 1983 T-AO program be applied to the design effort. The Navy has deferred $5 million from the fiscal year 1982 T-AO appropriation to fund the design effort but has not yet begun any work.

QUESTION: When will the Navy commerce work on this program?
ANSWER: Design work has commenced on the AO-177 Jumbo program. The program is on track for an FY-88 award as requested in the President's FY-86 Budget.

QUESTION: Why has the Navy not sought to establish separate funding for this program in the fiscal year 1986?
ANSWER: The AO-177 class design effort is funded in FY-86 in the Ship Design R&D request. Navy considered accelerating the program to FY-87 during budget preparation but was restrained by a combination of force level and fiscal issues.

QUESTION: Why has the Navy delayed this program despite Congressional support?
ANSWER: The five ship AO-177 class is providing service to the existing fleet. There is a current three ship fleet oiler shortfall. The majority of the oiler force has been in service over 38 years. The AO-177 class is also the only 20KT class in the fleet oiler force; this capability is critical in Indian Ocean committments.

Navy cannot take the AO-177s off-line until sufficient TAO-187 Class have been delivered and complete fleet introduction to take their place. Navy is also attempting to coordinate these conversions with normally scheduled maintenance availabilities to gain additional economy.

LCAC LANDING CRAFT AIR CUSHIONED

QUESTION: The Navy has contracted with Bell Textron for 12 LCACs, out of a planned total program size of 90. Bell delivered the first LCAC to the Navy on December 14, 1984. In December 1984 Bell identified $11.1 million cost growth on the fiscal year 1982/83 LCAC contract for LCACs 1-6.

In April 1985 the Navy converted this contract with Bell Textron from cost plus award fee to fixed price incentive to limit its liability for future funding. The contract conversion required on "out of sequence" ship cost adjustment.

In March 1984 the Navy conducted a design competition to establish a second source LCAC manufacturer as Congress directed. Of the six firms bidding, the Navy selected Todd and Lockheed to compete for the second source production contract and purchased unlimited rights to the two firms' baseline proposals for general specifications. In March, 1985, the Navy issued a request for proposals, calling for competitive bids (to either baseline) by April 25, 1985 for the second source craft production contract. What are the costs and anticipated economic benefits of developing a second source contractor?

ANSWER: For budget purposes we have included $34.9 million. However, we believe that this amount will be reduced substantially and that competition on follow craft will recoup these costs.

QUESTION: What is the total amount of, and reasons for, cost growth in this program?
ANSWER: Additional program funds of $9.5 million are required to cover the contract overrun. The total contract overrun is $11.1 million. This has resulted from lower productivity and higher cost on the Bell Textron contract.

Statement of Fact

In fiscal year 1985 the Congress appropriated $230.1 million for 9 LCACs. The Navy plans to award these craft to Bell Textron and the second source contractor. In March 1985 the Navy modified Bell's 1984 fixed price incentive contract to provide $59.1 million (from the fiscal year 1985 appropriation) for the purchase of long lead time material for the 9 fiscal year 1985 LCACs. Bell will provide this material to the second source for their initial production contract. In the future the second source contractor will use its own subcontractors.

Contract award for the fiscal year 1985 LCACs (both second source and prime contractor) is scheduled for June 1985. The Navy may delay the award until the Acquisition Review Committee makes a full production decision about the 9 LCACs in September 1985.

QUESTION: Why is the Navy requesting fiscal year 1986 funds for LCAC if it has not yet decided to go into full production and has not yet awarded fiscal year 1985 contracts?

ANSWER: Incorporation of all trial deficiencies into the design to avoid later costly implementation by change orders, has delayed FY 85 contract awards. The LCAC production schedules have been protected by advance authorization of materials and equipment. Only minimal impact on the production is expected. The FY 86 program is required to maintain production schedules and fleet deliveries.

QUESTION: What factors will be considered in the Navy's full production analysis?

ANSWER: Affordability, effectiveness and suitability are the main issues. The LCAC has already demonstrated performance in excess of requirements. Suitability centers on craft reliability and logistics support. Correction of discrepancies noted on first craft will ensure future reliability and logistics support aspects are being implemented on schedule. Affordability is best ensured through the competitive pressure being introduced through the second source process and fixed price type contracting. All of these ingredients are reviewed by the Acquisition Review Council in rendering a full production decision.

AUXILIARY CRANE SHIPS (T-ACS)

Statement of Fact

By 1989, the Navy plans to conve... 12 containerships to crane ships to self-unload heavy cargo and unload containerships and other ships alongside when port facilities are not available. T-ACS ships are to be maintained in high degrees of readiness while in the Ready Reserve Fleet (RRF). When activated, the ships will be crewed by merchant seamen and will be operated by general agents for the Military Sealift Command.

The lead T-ACS ship was delivered from Bay Shipbuilding Corp. to the Maritime Administration on May 7, 1984. In June, 1984, the Navy requested MARAD to activate and convert the second vessel, T-ACS 2. MARAD awarded the T-ACS 2 contract to Continental Maritime in September, 1984. The Navy has now requested MARAD to activate and convert the third vessel, T-ACS 3. Congress appropriated $36 million in Shipbuilding and Conversion, Navy (SCN) funds for T-ACS 3 in fiscal year 1985 and Navy is requesting $82.5 million for 3 additional ships in fiscal year 1986.

QUESTION: The fiscal year 1983 T-ACS #1 and the fiscal year 1984 T-ACS #2 were converted using Operations and Maintenance, Navy (OMN) and other Procurement, Navy (OPN) funding. Provide a breakdown for the T-ACS 1 total cost estimate and indicate which appropriation accounts the funds came from. Include acquisition cost to the National Defense Reserve Fleet (NDRF), ship conversion costs, crane costs, and upgrade and equipment costs.

ANSWER: T-ACS 1 Cost Breakdown by Appropriation:

BASIC CONV (OPN)	$ 5,697,500.00
CRANES AND CHANGES (OPN)	$ 9,619,000.00
REACTIVATION (OM&N)	$ 6,231,677.00
UPGRADE & EQUIPMENT	NSP*
PROGRAM SUPPORT COSTS/ TESTING (RDT&E)	$ 5,272,989.00
TOTAL	$26,821,166.00

Acquisition costs to the NDRF were $5.0 million.
* Not separately priced.

QUESTION: In fiscal year 1984, the Congress appropriated $22.4 million for T-ACS 2. This funding included $10.9 million in the OPN account for cranes, $10.5 million in the O&M,N account for ship conversion and $1.0 million in the O&M,N account for ship upgrade. Provide a total cost estimate of T-ACS 2 and specify the budget accounts the funds will come from. Include acquisition cost to the NDRF, conversion costs, crane costs, and upgrade and equipment costs.

ANSWER: T-ACS 2 cost breakdown by Appropriation:

UPGRADE & EQUIPMENT	$ NSP*
CRANES (OPN)	$ 9,750,000.00
CONVERSION W/CHANGES (OM&N)	$10,483,000.00
REACTIVATION (OM&N)	$ 1,450,000.00
PROGRAM COSTS (RDT&E, OPN)	$ 1,575,000.00
TOTAL	$23,258,000.00

Acquisition costs to the NDRF were $5.1 million.
* Not separately priced.

QUESTION: Are all upgrade and equipment costs, previously under O&M,N and OPN accounts, now included under the SCN account for fiscal year 1985 and the fiscal year 1986 requests?

ANSWER: Yes, the FY 1985 and FY 1986 T-ACS will be fully budgeted in the SCN appropriation.

QUESTION: The February, 1984 program cost breakdown, exhibit P-22, indicated that the Navy requested $44 million to convert 2 ships for fiscal year 1985. The Navy internally revised the estimate to $56.4 million for one east coast conversion at $26.7 million and one west coast conversion at $29.7 million. Therefore, the Navy request of $44 million would not fully fund the conversion of 2 ships and the Congress reduced the request by $8 million, appropriating $36 million for 1 T-ACS. Compared to the T-ACS 1 and 2 conversion costs which are estimated at $20-21 million each and the Navy's internal estimates of $26.7 to $29.7 million for T-ACS 3, the T-ACS 3 fiscal year 1985 appropriation is from $6.3 to $16 million higher. What is the current estimated cost for T-ACS 3 and how will additional fiscal year 1985 appropriated funds be used?

ANSWER: Current T-ACS 3 Estimate:

BASIC	$21.720 M
CHANGE ORDERS	5.175 M
HM&E	1.750 M
OTHER COST	1.650 M
PMG	.175 M
TOTAL	$30.470 M

The difference between the $36 million appropriated and the $30.5 million estimated for the conversion ($5.5)million is being considered as a potential offset for the T-AVB program.

There are no Navy costs associated with the acquisition of T-ACS 3. MARAD costs for T-ACS 3 based on the Construction Differential subsidy were $5.6 million.

QUESTION: What is the total program size and schedule for TACS compared to the Sealift Study?

ANSWER: The total TACS program size as requested in the budget request for fiscal year 1986 is 11 ships. However, analysis conducted during the RRF resizing study indicates that a program sized at 12 crane ships will be required. This program growth will be addressed in next year's request.

QUESTION: How many TACS are to support Army operations? Navy operations?

ANSWER: In theater utilization of TACS will be highly dependent upon requirements of a particular contingency and allocation of assets. However, based on the scenario used in the DOD sealift study and as refined in the RRF resizing study, it is estimated that nine TACS will be in support of Army off-load requirements and three TACS for USMC.

QUESTION: List the ships already purchased by the Navy and MARAD for conversion and the price paid for each.

ANSWER: The below listed ships have been designated for the first six TACS. These ships were already held in the National Defense Reserve Fleet resulting in no direct acquisition cost to Navy. MARAD acquisition cost under the Construction Differential Subsidy Program is indicated below for each ship.

SHIP	SOURCE	GROSS PRICE	NET PRICE	TYPE
PRESIDENT HARRISON	APL	$6.65M	$ 5,004,574	CDS
PRESIDENT MONROE	APL	6.65M	5,134,390	CDS
PRESIDENT POLK	APL	6.2 M	5,644,243	CDS
EXPORT LEADER	FARRELL	13.0 M	12,912,944	CDS
STAGHOUND	FARRELL	12.5 M	12,426,625	CDS
LIGHTNING	FARRELL	12.5 M	12,373,185	CDS

QUESTION: What is the procurement status of additional ships to complete the TACS program?

ANSWER: Funding for acqusition of additional container ships for future TACS conversion is contained in the SCN request for RRF ship procurement.

QUESTION: Is funding for all support equipment (causeways, piers, etc.) necessary for TACS operation requested this year? If so, provide a breakdown of the funds requested by item and appropriation account.

ANSWER: Funding for support equipment such as causeway lighterage and elevated causeway piers to be used during the offload of TACS as well as other ships is funded in the OPN appropriation account and is listed in the amphibious equipment line with dollar amounts as indicated below:

	$M FY-86	FY-87	FY-88-90	TOTAL
Amphibious equipment	$73.0	$99.1	$228.6	$400.7

QUESTION: Does the information provided in Question 9 pertain to support equipment only for those TACS anticipated to be used to support Navy operations? Please provide a breakdown of all support equipment needed for Army operations and indicate what funds have been requested by item and appropriation account.

ANSWER: The funding indicated above provides the equipment to support the Navy-USMC offload equirements. Requests for Army requirements and program funding detail should be addressed to Army.

QUESTION: What special shipping needs are required to deliver this support equipment to TACS operational areas in a timeframe consistent with the deployment of the TACS?

ANSWER: Some of the support equipment (causeways and piers) can be carried aboard the TACS. Additional support equipment will be loaded aboard other ships and offloaded, in theater, by the TACS or carried by LASH ships and heavy lift ships.

QUESTION: The Navy is now planning to augment the capabilities made available by the 12 TACS by funding purchases of a large number of mobile cranes and supporting equipment which would be installed on many merchant containerships in time of emergency. Such cranes would enable containerships to self-offload without the services of TACS. Does such planning indicate that 12 TACS systems are not enough?

ANSWER: The concept of employing mobile cranes and supporting equipment aboard container ships to provide a self-offload capability has been under study and would be an augmentation to the crane ship program. The development of this offload concept does not indicate that 12 TACS are not enough. The TACS program is sized to the heavy lift requirement whereas use of mobile cranes and equipment to support their use aboard non-selfsustaining container ships provides a more economical means of handling the lighter loads of containers and combat vehicles smaller than the battle tank.

QUESTION: How many TACS would be needed if this program called "Crane Enchancement Containership" (CEC) becomes a reality? How many will be needed if it does not?

ANSWER: Twelve crane ships are required to handle the heavy lift requirements of a major deployment. Specific analysis was not conducted to determine the number of TACS required to complete the offload in the specified time if the mobile crane systems on "Crane Enhanced Containerships" (CEC) does not become a reality. The use of additional TACS to complete the offload of much of the lighter lift requirements that can be adequately lifted by the mobile crane systems would be a costly excess of capability.

QUESTION: What support equipment in addition to that identified in questions 9, 10 and 11 would be needed to support an operation with 12 TACS and CEC ships?

ANSWER: No additional support equipment would be required to support an operation with 12 TACS and CEC configured containerships. The Navy's offload equipment program is a balanced program sized to the interdependencies of each major piece of equipment.

CARRIER KITTY HAWK SLEP

QUESTION: For the Kitty Hawk, which will enter the Service life extension program in July 1987, the Congress appropriated $131.3 million of advance procurement funds in fiscal year 1985. Navy requests an additional $133.4 million advance procurement funds in fiscal year 1986. Although the advance procurement funds are for specific long lead items, an analysis of the Navy's fiscal year 1986 request shows planned procurement of general items, such as material for use by the ship's crew. Since advance procurement funds are for long lead items, why does the Navy's justification for fiscal year 1986 advance procurement funds include general items, such as ship's force material?

ANSWER: The Naval Sea Systems Command is required by Naval instructions to have all required material in support of Service Life Extension Program delivered to the execution shipyard at the start of each availability. These instructions are to preclude delay and disruption to the shipyard production schedules which would result from the non-availability of required material. Ship's force is assigned a small industrial work package (about 200,000 mandays). The $4.0 million requested in FY 86 will procure necessary tools and the longest lead time portion of their repair materials (material production lead times of 12 months). The $4.0 million requested in FY 86 is estimated to be 40% of the total $10.0 million required to complete the CV 63 ship's force work package.

QUESTION: For the Kitty Hawk, which will enter the Service life extension program in July 1987, the Congress appropriated $131.3 million of advance procurement funds in fiscal year 1985. Navy requests an additional $133.4 million advance procurement funds in fiscal year 1986. Although the advance procurement funds are for specific long lead items, an analysis of the Navy's fiscal year 1986 request shows planned procurement of general items, such as material for use by the ship's crew. What is the status (obligated/unobligated) of the $131.3 million Congress appropriated in fiscal year 1985? For the funds that have been obligated, what material has been purchased and when will it be received? For unobligated funds, what does the Navy plan to buy, when will the funds be obligated, and when will the items be received?

ANSWER: See attached chart:

PROJECTED OBLIGATIONS:

ITEM	($ IN THOUSANDS)	ANTICIPATED RECEIPT DATE	REMARKS
AN/SPS-49 V5 Radar Kit	950	July 1987	May 1985 Award planned
SSTG Turbine Casings (8)	3500	July 1987	June 1985 Award
MK 23 TAS Radar Ancillary Equip.	336	July 1987	June 1985 Award
MK 23 TAS Radar	2584	July 1987	July 1985 Definitize letter contract
NTDS HARDWARE	20800	July 1987	July 1985 Award
363 Ton Air Conditioning Plants (5)	775	July 1987	July 1985 Letter contract award
AN/SPS-48E Radar	4880	July 1987	Aug 1985 Definitize letter contract
MK 23 TAS Radar Ancillary Equip.	666	July 1987	Aug 1985 Award
AN/SPN-46 Aircraft Landing System	7000	July 1987	Aug 1985 Award
AN/SYS (2) Integrated Automatic Detection and Tracking	1174	July 1987	Aug 1985 Award
NTDS Ancillary Equipment	1075	July 1987	Aug 1985 Award
AM 2316 Amplifiers (12)	198	July 1987	Sep 1985 Award
MK 23 TAS Radar Integration	500	July 1987	Sep 1985 Award
AN/SPN-46 ACLS Ancillary Equip.	2000	July 1987	Sep 1985 Award
Turbine Driven Firepumps (4)	926	July 1987	Sep 1985 Award
Salt and Chill Water Air Conditioning Pumps (5 ea.)	390	July 1987	Sep 1985 Award
AN/SYS (2) Integrated Automatic Detection and Tracking Software	2174	July 1987	Sep 1985 Award
Miscellaneous NAVELEX Equip.	1133	July 1987	Sep 1985 Award
Alteration and Repair Material	7407	July 1987	Sep 1985 Award
Total Anticipated Awards in FY 1985	58468		
Total Obligations FY 1985	129575		
FY 1986 Obligations			
AN/SPS-49 V5 Radar Kit	950	July 1987	Nov 85 Definitize letter contract
363 Ton Air Conditioning Plant (5)	775	July 1987	Jan 86 Definitize letter contract
Total FY 1986 Obligations	1725		
Total FY 1985 Obligational Availability	131300		

OBLIGATIONS:

ITEM	($ IN THOUSANDS)	ANTICIPATED RECEIPT DATE	REMARKS
Detailed Design	10000	July 1987	
Alteration Material	7000	July 1987	
Repair Material	8000	July 1987	
	25000		
Main Feed Pumps (13)	2997	July 1987	
HP/LP Rotors and Casings	18209	July 1987	
Wet Accumulators (4)	2700	July 1987	
Magnesium Propellers (4)	767	July 1987	
	24673		
Single Audio Switch Switching Matrix	650	July 1987	
MK 23 TAS Radar	2246	July 1987	Letter contract awarded (Feb 85)
AN/SPS-48E Radar	5400	July 1987	Long lead time material contract awarded (Apr 85)
NAVAIR			
Long lead time Catapult Equip.	4787	July 1987	
MK-7 Mod 3 Arresting Gear	6832	July 1987	
Jet Blast Deflector Equip.	1135	July 1987	
Aviation Support Equip./Serv.	384	July 1987	
	13138		
TOTAL OBLIGATED	71107		

CARRIER KITTY HAWK SLEP

QUESTION: For the Kitty Hawk, which will enter the Service life estension program in July 1987, the Congress appropriated $131.3 million of advance procurement funds in fiscal year 1985. Navy requests an additional $133.4 million advance procurement funds in fiscal year 1986. Although the advance procurement funds are for specific long lead items, an analysis of the Navy's fiscal year 1986 request shows planned procurement of general items, such as material for use by the ship's crew. One of the factors influencing the need for advance procurement funds is the long procurement lead times. For example, the "administrative" portion of the advance procurement lead time is 12 months or more. Is there potential for shortening these lead items and requesting the advance procurement funds later?

ANSWER: DOD policy is that administrative lead time is not allowed in the formulation of advance procurement budget exhibits. All of the administrative functions such as procurement document specification preparation, advertising, and negotiation up to the point of signing contracts, etc., are accomplished prior to receipt of funding. The date shown on budget exhibits for "contract required" is based solely on vendor's production lead time necessary to ensure that the equipment arrives at the execution shipyard by the start of the availability.

The Navy is always seeking ways to reduce procurement administrative lead items, however, as procurement regulations become more stringent the tendency is for longer rather than shorter leadtimes.

AIRCRAFT CARRIER SERVICE LIFE EXTENSION

QUESTION: The Navy's policy is to have all material on hand when a carrier arrives at the shipyard for its SLEP. Prior to the carrier's arrival, a number of changes may be made to the SLEP work package, including the modernization and alterations that will be made to the carrier. Why has the Navy established the policy to have all SLEP material at the performing shipyard on the day the carrier arrives for its SLEP? To what extent does this policy contribute to excess material when subsequent changes are made to the SLEP work packages?

ANSWER: The length of the industrial availability does not allow flexibility in changing production schedules to accommodate late deliveries of GFE. Because of the need for parallel work to accomplish essential repairs and alterations within the time period available, a firm commitment to accomplish work planned is essential. This must be based on the certainty of material availability.

QUESTION: What is the Navy's rationale for requesting funds for long lead material prior to the modernization verification conference which establishes the specific alterations that will be made to the carrier?

ANSWER: While final decisions of composition of the alteration package are made at the modernization verification conference, many of the major high cost alterations are known in advance; the lead time for some items requires procurement as much as three years prior to start of the SLEP availability. Waiting until after the modernization verification conference to develop and submit budget requirements would not support timely budget approval and procurement actions.

QUESTION: Why doesn't the Navy reduce its request for funds for advance procurement of long lead items when the related ship alterations have either been cancelled or previously accomplished?

ANSWER: The Navy's budget submissions are continually updated and revised to reflect the development of precise repair and alteration packages. Both additions and deletions to advance procurement needs result from Fleet Modernization Program adjustments.

QUESTION: The Navy has excess material of $11 million and $6 million after completing the SARATOGA and FORRESTAL SLEPs respectively. To date, the Navy has approximately $9 million of the excess material left. What was the mix between standard and non-standard items for the initial $17 million in excess materials resulting from the SARATOGA and FORRESTAL SLEPs and what is the mix of the remaining $9 million of excess material?

ANSWER: At the end of the SARATOGA SLEP $11.7 million in excess material was available. This material was $9.2 million standard material and $2.5 million non-standard material. To date $6.5 million (55%) has been used elsewhere. At the conclusion of FORRESTAL SLEP, about $6.6 million in excess material is expected. Of that amount $5.4 million is standard material, and $1.2 million non-standard material. To date $2.8 million (36%) has been transferred to other applications.

QUESTION: To what extent does the Navy make this excess material available to Navy activities other than the performing shipyard?

ANSWER: Through an Assets Visibility Program, the Philadelphia Naval Shipyard identifies excess materials to other Navy industrial activities through a monthly listing. In addition, the listing of non-standard material is provided to the Navy engineering and design activity responsible for aircraft carrier design.

QUESTION: When excess material from one SLEP is used on another, does the Navy reduce its funding requests accordingly?

ANSWER: The opportunity to apply materials to a subsequent SLEP results in a charge to the using ship. To the extent that transfer can be made prior to completion of the SLEP for which the material was identified as excess, the value of the material transferred can be applied to new or emergent work during its availability.

QUESTION: Is any of the $9 million excess material planned for KITTY HAWK? If so, was this assumed to offset advance procurement budgets?

ANSWER: Where possible, available materials which can be used for INDEPENDENCE will be transferred, and the same process will be applied for KITTY HAWK SLEP. Before ordering material, the shipyard routinely screens its material availability listings to determine if material is already available. A charge to the SLEP program is made when the material is issued, so a budget reduction would not be appropriate.

QUESTION: In fiscal year 1985 the advance procurement request for the KITTY HAWK was reduced $50 million by the Congress. Was any of this reduction "restored" in the Navy's fiscal year 1986 request? If so, explain where these funds are budgeted.

ANSWER: No, the Navy did not "restore" funds reduced by Congress in fiscal year 1985. As a result of Navy evaluation of scope and duration of KITTY HAWK SLEP, the total end cost for KITTY HAWK SLEP in the fiscal year 1986 budget submission was revised from the fiscal year 1985 submission, and advance procurement requirements were submitted where required to meet schedule needs.

AEGIS GUIDED MISSILE CRUISER

For fiscal year 1986, the Navy is requesting about $2.8 billion to build three CG 47 cruisers, plus $14.6 million in advance procurement funding. The Navy plans in 1984 called for a total procurement of 26 AEGIS-equipped CG 47 cruisers, at a combined cost of $28.8 billion. Recent Navy estimates show the quantity of CG 47 cruisers planned for procurement being increased to 27, with a total program cost of $27.4 billion.

QUESTION: What constitutes the need for an additional cruiser?

ANSWER: The Navy's plan for 27 CG 47s has existed for several years. The quantity was determined after careful analysis of our requirement to support Carrier Battle Groups and Surface Action Groups of the 600 ship Navy.

QUESTION: Would the current addition or any further additions to the CG 47 class be used to offset the number of DDG 51 missile destroyers to be procured?

ANSWER: Possibly. 27 CGs is consistent with 29 DDG-51's. A further change in the number of cruisers, a change in planned retirements of older destroyers, a reconsideration of cruiser/destroyer missions, or a change in threat could increase or decrease DDG-51 numbers.

QUESTION: Specify where cost savings have been realized in each prior appropriations which have allowed for the reduction in total estimated program costs.

ANSWER: These savings, totaling $296 million and $243 million respectively, were primarily due to lower inflation plus lower shipbuilding and equipment contract awards.

QUESTION: Explain why there has been an increase in escalation reserves in the fiscal year 1986 estimate compared to FY 1985.

ANSWER: "Escalation" is a reserve calculated on "Basic Construction". In the 1986 Cruisers, the "Basic Construction" estimate was based on option prices quoted in FY85 shipbuilder contracts. Since these quotes had a May 1984 basis, the 1986 ships will be exposed to one more year of escalation than the 1985 ships. The net result is lower "Basic Construction" costs but slightly higher "Escalation" costs for the 1986 ships.

QUESTION: Why have plan costs continued to increase each year since fiscal year 1983, given that construction is for follow-on ships?

ANSWER: There has been no real increase in cruiser Plans costs since 1984. Changes that occurred were driven primarily by annual inflation. There was an increase from 1983 to 1984. This increase was driven by the Navy's decision to switch over to competitive fixed price shipbuilding contracts in 1984. This forced more design work and liaison to be completed up front as part of "Plans".

CG 47 UPGRADES

The CG 47 class has undergone a series of three upgrades, or baseline improvements, since the production of the lead ship TICONDEROGA. A fourth baseline upgrade is now planned which includes the introduction of the UYK-43 computer into the cruiser class. This upgrade was scheduled for incorporation into CG 63, but has now been delayed to CG 65.

QUESTION: What are the reasons for delaying this fourth upgrade until production of the CG 65?

ANSWER: Introduction of the UYK-43 computer is in CG-63. It has not been delayed to the CG-65. UYK-43's were originally to begin with CG-62 but were delayed in March 1985, to CG-63. This was caused, in part, by additional AEGIS Weapon System "second sourcing" workload both in the Navy and at RCA.

QUESTION: What is the status of the UYK-43 computer?

ANSWER: Design verification tests are complete. Performance, capacity, and software capture from the UYK-7 computer have been successfully demonstrated. The following milestones apply:

Final development tests at Fleet Combat Direction System Support Activity (FCDSSA), Dam Neck, VA	May 1985
Limited Production Authorization Request	Aug 1985
Initial Operational Capability At-Sea	Mar 1987
Navy Support Date	Apr 1987

QUESTION: What are the extent of problems, if any, in obtaining an adequate supply of UYK-43 computers?

ANSWER: There have been some problems along the way-not atypical in the transition from development to pre-production programs. These difficulties combined with an ambitious effort to move the UYK-43 into the fleet resulted in late delivery of initial orders. But, our early start-up problems have been resolved and current deliveries are meeting a revised fleet introduction plan. On-time delivery of future orders may require additional capital investment to increase planned production capacity if orders reach maximum contract quantities. However, there are no known technical or manufacturing problems that limit our ability to meet these increased requirements.

QUESTION: With Baseline IV upgrades delayed to CG 65, what will be the cost savings by appropriation year for CG 62/63/64 from the postponement of the equipment?

ANSWER: Baseline IV is targeted for CG-63, not CG-65.

AEGIS SYSTEM-SPY 1 RADAR

QUESTION: Is the SPY-1B on schedule?

ANSWER: Yes. The first SPY 1B for CG 59 is proceeding smoothly into production - on schedule and within budget. An FY 85 contract was signed in March 1985 for three more AEGIS Systems with SPY 1B and one with SPY 1D. Three SPY 1Bs for the FY 86 ships are expected to be approved based on the results of a September 1985 Operational Test.

QUESTION: What is the status of the SPY-1B antenna?
ANSWER: The SPY 1B/D Engineering Development Model consists of an antenna, transmitter, and signal processor. The antenna was landed at the Combat System Engineering Development Site, Moorestown, N.J., in September 1984 after a slight delay. In April 1985, performance of the antenna during operational testing was outstanding in all respects.

QUESTION: Has the antenna met all required technical specifications? If not, explain the impact on the CG 47 program.
ANSWER: The antenna has met all technical specifications except in initial near-field testing. In these tests, higher than specified sidelobes were observed in some cases. The problem has been fixed and has been corrected in production by refinement of equipment tolerance adjustments and by a small adjustment in the production design and tooling.
There is no impact on the CG 47 building program, and none is expected. SPY 1B/D performance requirements are being exceeded.

QUESTION: What are the Navy's plans for second sourcing the AEGIS Weapon System?
ANSWER: In 1985 the Navy will begin establishing additional sources for the AEGIS Weapon System. All second sources will be in place by the end of FY 87, with full competition by FY 90. The chart below provides the specific schedule of events.

Component	Source Selection	First Unit Procurement	Competition
Fire Control Directors	FY 85	FY 86	FY 87
Fire Control Transmitters	FY 85	FY 86	FY 87
Solid State Freq. Converters	FY 86*	FY 86	FY 88
SPY 1 Antennas	FY 85	FY 87	FY 88
SPY 1 Transmitters	FY 85	FY 87	FY 88
Signal Processors	FY 87	FY 88	FY 90

*select two sources

QUESTION: At what point will the procurement of the system be considered fully competitive?
ANSWER: 1990.

QUESTION: What savings will result from second sourcing the system?
ANSWER: It's too early to be precise, but we anticipate some savings. The Vertical Launching System, for example, experienced a reduction in equipment costs when full competition was achieved. Our equipment savings could be similar.

DDG 51 DESTROYER ADVANCE PROCUREMENT

The award of the DDG 51 shipbuilding contract slipped four months from December 1984, to April 2, 1985. The Navy plans to award contracts for the two follow-on ships (DDG 52/53) in fiscal year 1987. Accordingly, the Navy is requesting $164.3 million in advance procurement funds in fiscal year 1986 for DDG 52/53. Several items for which advanced funds are being requested, such as the AEGIS Weapon System and AN/SQR-19 Towed Array Sonar, are similar or identical to equipment found on the CG 47 cruiser class, but which are procured without advance procurement funding.

QUESTION: What impact will the delay in awarding the DDG 51 lead ship contract have on the contract award date for the two follow-on ships?

ANSWER: None. The planned contract award for the FY 87 ships is still scheduled for November 1986.

QUESTION: If the follow-on shipbuilding contract award date has been delayed, has the Navy adjusted/reduced its advance procurement funding request for the DDG 52/53 accordingly?

ANSWER: There is no delay.

QUESTION: Why are advance funds required for DDG 51 class equipment (such as the AN/SQR-19) which is being procured for the CG 47 cruiser class without advanced funding?

ANSWER: Advance funding requirements are determined by matching the production lead times for individual equipments with their required delivery dates at the shipyard. Since the FY 87 CG shipbuilding interval is 56 months and the DDG's is 48 months, there are eight months more lead time available to CGs. For example, for SQR-19, these dates apply:

	CG	DDG
1st FY 87 Ship Delivery	6/91	11/90
Months Equipment Required Before Ship Delivery	18	18
Date Equipment Required at Shipyard	12/89	5/89
Months Equipment Production Lead Time	39	39
Required Equipment Contract Award Date By Calculation	9/86	2/86
Planned Equipment Award Date	10/86	2/86
Funds Required	FY 87	FY 86

MCM

QUESTION: Given the delay of over one year's time in scheduled delivery dates for the MCM-3 and MCM-5 (and probably for the MCM-4 as well), what impact will this have on the delivery schedules for MCM-6 through MCM-9? If these MCMs are to be delayed a year or more, what is the Navy's justification for requesting these funds for MCM-10 through MCM-13 in fiscal year 1986? Why not request the funds in fiscal year 1987?

ANSWER: The award of MCM 6-9 shipbuilding contracts is later than originally planned in order to assure that corrections to past problems had been incorporated into the ship specifications prior to contract award and to conduct negotiations with the shipbuilders to limit government cost liability on the MCM 1 and 2 contracts. Also due to the complexity of the MCMs, a minimum building period of 36 months is required vice the 30 months originally planned. As a result, the MCM 6-9 deliveries will occur in 1988. The Navy plans to deliver MCMs 10-14 in 1989, completing the MCM program by 1990 as originally planned. If the four FY 86 MCMs were moved to FY 87, there would be a significant shipyard layoff and then the work force would have to be rebuilt at both shipyards, requiring significant restart efforts. In addition, the vendors of all the specialized non-magnetic equipment will have to shut down and then restart their production lines. There are very few vendors for this equipment. The above shutdowns/layoffs and restart/rehiring will be costly. An additional escalation cost would also be incurred because of later performance of work. The MCM program would not complete until 1991, a year later than planned. There will also be an additional cost to keep the aging MSOs in the fleet a year longer than their planned retirement. The Navy requests that the four MCMs in the FY 86 budget request be funded.

QUESTION: When will definitization of work necessary for installation of Isotta Fraschini engines on the MCM 4 be completed so that the Navy may set a new firm delivery date for the MCM 4.

ANSWER: The delivery date for MCM 4 with the Isotta Fraschini engine has been established with the shipbuilder as December 1987.

QUESTION: How will the lead time of 17-24 months for obtaining Isotta Fraschini engines lengthen the projected delivery schedule for ships MCM 3 through MCM 9?

ANSWER: The lead time for Isotta Fraschini (I/F) engines is twelve months. Current contract delivery dates for the Isotta Fraschini engines support the MCM 3-9 delivery dates.

QUESTION: Have engine reduction gear problems on the MCM 1 and the MCM 2 been resolved? What are the additional costs involved?

ANSWER: The reduction gear problems on the MCM 1 and MCM 2 have been resolved. The costs of this shipbuilder-furnished equipment are contained in the basic contract costs.

QUESTION: Describe the funding for the ILS package. Is it adequately funded or are there any shortfalls?

ANSWER: Funding to support the ILS program for MCMs is included in both the estimated SCN End Costs of the ship (e.g., Technical Manuals, Spare Parts, Training Equipment, etc.) and the O&MN appropriation (Training Course development and conduct). The ILS package is adequately funded.

QUESTION: Until recently the Navy had planned to recompete the contract for engines for ships MCM 10 through MCM 14. However, SECNAV has decided not to recompete these engines. In summary, the Navy plans to install Isotta Fraschini engines on MCM 3 through MCM 14 and the Waukesha engines will be installed on the MCM 1 and MCM 2. What is the Navy's rationale for its decision not to recompete the engines? What factors (price estimate, economies of scale, bidding interest on the part of engine companies, etc.) were important in reaching this decision? What is the impact of this decision on the Navy's ability to ensure timely delivery of MCM 10 through MCM 14?

ANSWER: The Navy does not intend to recompete the engines in that a full and open competition has already been held and a very cost effective engine selected. A factor, other than acquisition cost, also considered for this very specialized type of engine was the cost of long term engine support. The cost of supporting multiple small population engine types is expensive. Therefore, continuing with the Isotta Fraschini engine is very cost effective for acquisition and the life cycle. The use of this engine will not affect the planned deliveries for the MCM 10 through 14.

MCM MISSION EQUIPMENT

QUESTION: The Navy has acknowledged experiencing problems with various sophisticated shipboard systems, including:

--Precise Integrated Navigation Systems (PINS) for the MCMs;

--Electromagnetic Interference (EMI) in a number of electronic systems, including the MCM ship bridge, the combat information center, and the Mine Neutralization Systems (MNS);

--Accuracy of the SQQ-30 Minehunting Sonar, an interim sonar system to be used temporarily on some MCMs until the advent of the more advanced SQQ-32 Sonar.

At what point in the MCM ship program's delivery schedule will these problems be resolved, i.e., which MCM will be fully operational?

ANSWER: The PINS problems have already been resolved. The EMI problems will be resolved on MCM 1 (Note that MNS operations require securing certain HF transmissions in accordance with MCM ship Top Level Requirements (TLR) and standard Navy operating tactics). There is no problem with the AN/SQQ-30 accuracy.

In summary, the MCM ship Top Level Requirements will be met on the MCM 1 by the installed MCM combat systems and she will be a fully operational ship when delivered to the fleet.

QUESTION: What problems has the Navy experienced with PINS? How are they being currently resolved? What is the cost impact of resolving them?

ANSWER: Past problems with PINS have centered around the computer program design. The PINS completed a successful Technical Evaluation in April 1985 indicating that all computer program design problems have been resolved. Therefore, there will be no additional costs to resolve problems.

Question: What is the status of efforts to correct EMI in the Combat System Equipments? What is the projected costs of correcting the EMI problems (break-down by ship)?

Answer: EMI testing of the combat system equipments on USS FIDELITY (MSO-443) was completed 28 January 1985. The maximum field levels measured using 2 HF transmitters were within the level we anticipated. Final costs to correct EMI shipboard and equipment problems cannot be determined until the MCM 1 has been fully tested. The final testing must be conducted on a fully operational ship which will be the MCM 1.

Question: Will the production model of PINS for MCM 2 be completed in late 1986 as currently planned? If not, what adverse impact may there be on the overall program?

Answer: Yes. The MCM 2 PINS is under contract and on schedule for delivery in late 1986.

Question: How has the Navy moved to improve the AN/SQQ-30 sonar? Past test results had raised questions as to it's efficiency in locating mines. Can it be a viable interim system until the SQQ-32 sonar comes on line February 1988 as projected?

Answer: The AN/SQQ-30 sonar system is a modernized, more capable version of the AN/SQQ-14 sonar which has been successfully operated on MSO-class ships for over 20 years. The AN/SQQ sonar has successfully passed Operational Evaluation and has demonstrated performance requirements. No improvements in AN/SQQ-30 minehunting performance are planned since this system is planned only as an interim system until the high performance AN/SQQ-32 sonar becomes available. The AN/SQQ-30 sonar meets the Top Level Requirements of the MCM and MSH-class ships and is, therefore, a viable system.

QUESTION: The 2 SQQ-32 test prototypes are scheduled to be completed and refurbished for installation (after testing) on MSH 2 and MCM 10 in 1986. The first production unit of the SQQ-32, designed for installation aboard the MCM 11 will be completed and installed in February 1988. How will ship delivery and sonar delivery schedules interface? Why is the Navy waiting until production of the MCM 10 before using its second prototype SQQ-32?

ANSWER: Based on the current MCM ship completion schedule, the two refurbished test prototypes will now go to MSH 2 and MSH 3. MCM 10 and MCM 11 will receive production units. The sonar for MCM 10 will be delivered 11 months prior to ship completion. In all cases, hardware required to be built into the ship (such as the sea chest, cables, etc.) will be available 12 months prior to ship completion and not impact ship delivery.

QUESTION: What purpose does the MCM 1 refurbished engineering development system scheduled for completion in August 1985 serve? What problem(s) will this system solve? And what are the costs?

ANSWER: Refurbished Engineering Development Model (EDM) systems of the Mine Neutralization Systems and AN/SSN-2 PINS will be installed on MCM 1. The Mine Neutralization System has already been delivered to the shipbuilder. The AN/SSN-2 will be delivered on schedule in October 1985, ten months prior to the MCM 1 ship delivery date of August 1986. These installations will make cost effective use of available equipments in accordance with the Navy's long-standing plan for MCM 1. There are not additional costs above those already planned and budgeted for installation, test and checkout of these systems on MCM 1.

MCM OPERATIONS

The Navy is currently undecided about whether to deploy any MCMs to overseas areas. Moreover, allies and friendly governments overseas having their own minesweeping capabilities are expected to clear their own waters. MCMs, according to Navy plans, are expected to assist MSHs first in clearing CONUS waters, i.e., "break-out" procedures, before being sent overseas.

QUESTION: Has the Navy re-studied the need for 14 MCM ships and/or how to ensure they can most effectively fulfill their mission? Correspondingly, would national security be better served through producing more MSHs at a lesser cost per ship than MCMs?

ANSWER: The MCM-1 and MSH-1 class mine countermeasures (MCM) ships will not normally be considered deployable. The highest priority mission for our MCM assets is to clear CONUS ports immediately after D-DAY. Before CONUS ports can be cleared, full manning of these ships with their SELRES and active crews will be required. The MCM-1 class ships are equipped to conduct the complete range of mine-hunting and mine clearing missions and are therefore deployable once fully manned. The MSH class ships, on the other hand, have considerably less endurance and are provided a modular mine countermeasures mission capability; these ships are regarded as non-deploying CONUS mine sweeping assets. The Navy's only rapidly deployable assets will be its AMCM helicopters. These MCM platforms are limited to daylight operations in certain scenarios and, more importantly, they have no deep water capability. All MCM assets are scenario dependent and complement each other during MCM operations. The Navy recognizes that factors contributing to the conclusion that resulted in the MCM force levels proposed by the MCM 85-90 Concepts Study may have changed. Requirements may have altered as a result of changes in strategic homeporting, revised threat perceptions or improved analysis techniques. Consequently, a MCM 90-95 Study was directed to be undertaken last year. The results of that study are anticipated in October 1985, however it is expected that mine countermeasures ship requirements will be no less than those currently programmed.

QUESTION: Has the Navy decided yet on its overseas basing alternatives?

ANSWER: The overseas basing of surface MCM assets is still under review by the Navy. Present plans [deleted] [deleted] are options still under consideration.

QUESTION: How well could the Navy's RH-53D and MH-53E minesweeping helicopters substitute for MCMs in a crisis? Could they be flown in a timely manner overseas in transport planes to perform MCM mission requirements?

ANSWER: The Navy's RH-53D and MH-53E helicopters are not just minesweeping helicopters but also perform minehunting functions with the AQS-14 Towed Sonar. RH-53s deployed to the Suez/Red Sea areas in 1984 and performed both minesweeping and minehunting missions. MCM Helicopters are representative of the U.S. Navy's quick reaction capabilty to respond to such crises as the Suez/Red Sea mining incidents. MCM helicopters are air-transportable when partially disassembled via C-5A aircraft. Their equipment is air-transportable via C-5A/C-130/C-141 aircraft. [Deleted] As addressed earlier, minesweeping helicopters are not a substitute for MCM ships in many mine countermeasures operations. A mix of ships and helicopters are required to meet the variety of operational mine countermeasures scenarios.

QUESTION: Advise the Subcommittee in detail about the status of the "Flag Officer Review" Group's efforts to identify and resolve current and future construction problems. Shouldn't Congress defer the FY86 request until the Flag Officer Review Group has resolved the current problems?

ANSWER: The MCM Flag Officer Review Group was established in February 1985 to identify and expedite the resolution of any remaining MCM technical and programmatic problems. The major issues have been identified and resolved or actions initiated to resolve them in the near future. The technical baseline for the MCMs is established and includes the corrective actions taken to resolve prior problems. The detail design for production is essentially complete. We are presently working to convert the MCM 1 and 2 contracts to limit the Governments's cost liability. New delivery dates have been agreed to in principle with the shipbuilders and a reprogramming request for MCMs 1-5 is being prepared that will incorporate the costs associated with these contract conversions. The MCM program is ready to proceed and the Navy requests that the subcommittee approve the FY86 program as submitted.

TRIDENT PROGRAM

QUESTION: The General Electric Company (G.E.) is the sole source for the SSBN Trident fire control system. In late 1984, GE received contracts for the development and production of fire control systems totaling $116.8 and $36.5 million for the U.S. and British Trident missile programs, respectively. DOD temporarily banned GE from future defense contracts on March 28, 1985. How will this ban impact upon the Trident ship building program? What alternatives are being considered?

ANSWER: This action will have no impact on the Trident II fire control program or the Trident ship building program unless the temporary ban remains in force for a lengthy period of time. Contracts are already in place which will cover necessary effort until FY 1986. The only alternative being considered, should the temporary ban proceed beyond the summer of 1985, is to request a waiver for the Fire Control Contract with G.E. Ordnance Systems.

SSN 688 PROGRAM

QUESTION: $98.8 million for advanced procurement funds is being requested by the Navy in fiscal year 1986 for fiscal year 1987 to procure CFE (contractor furnished equipment) long leadtime materials. The purpose as explained by the Navy is to take advantage of recent substantial investments in facilities, employment of new construction techniques by the shipbuilder to support accelerated delivery schedules and to take advantage of savings associated with economies of scale purchasing, but no further details were provided. What is the nature of these items? When are they actually required? What are the associated lead-times involved? Provide an explanation of the dates when these items are actually needed by the shipbuilders as well as any Navy initiatives taken to reduce Navy lead times.

ANSWER: Advance funding is required for numerous pieces of hardware, some of these items are: missile and torpedo tubes, sonar sphere, retractable bow planes, steel, and numerous valves and pumps. These items require up to three years of manufacturing time and, additionally will require administrative lead time by the shipbuilder for placement of orders. The dates that these equipments are required by the shipbuilder will vary at each yard due to differences in construction techniques.

The use of advance procurement is advantageous to both the builder and the government due to reduced construction times. By allowing the shipbuilder the needed leadtime in ordering these materials, construction can begin soon after contract award. Due to the advancements in construction techniques, e.g. preoutfitting of cylinders, many equipments are now loaded earlier in the construction process.

QUESTION: Could any items which are discussed above be included at the time when submarines are fully funded instead of requesting advance procurement funds?

ANSWER: All items could be included at the time when the submarines are fully funded but ship delivery schedules would be later and costs would increase.

PROPULSION SYSTEM

QUESTION: Last year the Committee directed the Navy to develop a Fiscal Year 1986 budget which incorporates known ship silencing design changes. Further, these changes were expected to be backfit to the Fiscal Year 1985 ships. What progress, if any, has the Navy had in complying with this direction?

ANSWER: The procurement specifications for the FY 1986 ships include 18 noise reduction items not present in the FY 1985 procurement specifications. Many of these items will be evaluated for possible accomplishment during the Post Shakedown Availability (PSA) period for the FY 1985 ships, as noise deficiency corrections.

QUESTION: The Committee is advised that the Navy evaluated a series of unsolicited proposals to reduce propulsion noise below design specifications. What are the results of the evaluations?

ANSWER: The Navy has decided not to pursue any of these proposals based on the results of the evaluations.

QUESTION: Does the Navy envision the submission of a budget request for SSN 688 Class ships which incorporates a propulsion system expected to operate below current design specifications? If so, when can the Committee expect the submission of such a program?

ANSWER: The Navy is evaluating the installation of the IPMP I engine in a single FY 1987 SSN 688 Class ship. This light weight propulsion plant uses new machinery technology which requires early at sea evaluation prior to full commitment of this technology to the SSN 21 program. In addition, the IPMP I engine runs at reduced RPM relative to the existing SSN 688 Class main engine. If decision is made to proceed with this installation, it is expected to be achieved within current budgeted program funding. A separate or modified budget request is not anticipated.

BUDGET DATA

QUESTION: The Fiscal Year 1986 SSN 688 submarine program budget reflects a seven percent overall increase when compared to the Fiscal Year 1985 budget. The major increases were for Basic Construction, Change Orders, Propulsion Equipment, and Project Manager's Growth P-8 line items. Basic Construction increases 11.7 percent -- from $1.06 billion in Fiscal Year 1985 to $1.18 billion in Fiscal Year 1986. What new construction features warrant this increase?
ANSWER: The Fiscal Year 1986 Basic Construction cost estimate has a base date that is two years later than the Fiscal Year 1985 contract option. This is due to the Fiscal Year 1985 prices being options to the Fiscal Year 1984 contract. The actual inflation between the two base dates,i.e., January 1983 to November 1984 is 7.7 percent. The remainder of the cost increase is due to costs associated with the implementation of a new contract.

QUESTION: Change Orders increase 11.7 percent -- from $53.1 million in Fiscal Year 1985 to $59.3 million in Fiscal Year 1986. Is this increase tied to Basic Construction estimates?
ANSWER: Yes. Change Orders are estimated, for budget purposes, at 5 percent of Basic Construction.

QUESTION: Propulsion Equipment increases 8.8 percent -- from $404 million in Fiscal Year 1985 to $440 million in Fiscal Year 1986. What changes to the propulsion system cause this increase?
ANSWER: The change in cost is attributable to escalation not changes in the propulsion plant. Propulsion plant equipment for SSN 688s is procured two years in advance to support ship construction schedules. In this instance, the equipment was procured over two different two year periods.

LONG TERM EFFECTS

QUESTION: The Navy's decision to reconfigure the SUBACS system raises long term issues. The Navy is now considering a different combat system design for the SSN 21 because SUBACS may not provide the advanced capability needed in the mid-1990 time-frame. What are the Navy's cost estimates for upgrading SSNs with Basic to SUBACS A/B?
ANSWER: The cost to upgrade the 21 SUBACS BASIC ships to SUBACS B is estimated to be $1.684.3 million to start in Fiscal Year 1992 and to be accomplished during restricted availabilites or during shipyard overhaul.

QUESTION: What are the long term costs for maintaining SUBACS BASIC systems in the fleet, and where will the funds come from:
ANSWER: The long-term operating and support costs for the replanned program are not available yet, but will be included in the Decision Coordinating Paper (DCP) to be submitted to the

Defense Acquisition Review Council for approval later in 1985. Current indications are that the long-term operating and support costs will be lower than for the previous architecture since recurring cost and quantities of necessary hardware have been reduced. O&MN is budgeted for SUBACS BASIC life cycle support.

QUESTION: What effect does reconfiguring the system and restructuring the SUBACS program have on the SSN 21 program?

ANSWER: The reconfigured system and restructured SUBACS program have reduced the risk in cost and schedule to deliver SUBACS BASIC to SSN 751, while leaving sufficient funds to develop a SUBACS B combat system to meet all performance requirements for the SSN 21.

QUESTION: What are the estimated costs for developing a different combat system for the SSN 21?

ANSWER: The total development costs for SUBACS B/B for the Fiscal Year 1989 authorized SSNs including the SSN 21 is estimated to be $1316.1 million. Since the SSN 21 has additional unique sensors and capabilities over the 688s, about $164 million is unique to SSN 21 development.

QUESTIONS SUBMITTED BY SENATOR MCCLURE

QUESTION: What is the likelihood that we will achieve a shipbuilding budget of $17 billion in FY 1987? (11 Billion in Budget authority in FY 1986.)

ANSWER: The navy does not anticipate attaining a $17 billion shipbuilding and conversion budget for FY 1987.

QUESTION: If we achieve such a shipbuilding budget, will this mean 5 DDG 51s laid down per year, using 3 yards?

ANSWER: It is inappropriate to speculate on the number of ships of a given class that might be built with budgets unlikely to be attained.

QUESTION: If 3 yards are selected for the DDG 51 AEGIS destroyer, will Todd Shipyard in California be one?

ANSWER: Todd is expected to compete against other interested yards to be a source for this class. It is too early to judge if they will be successful.

QUESTION: Why was National Steel Company, NASSCO, not selected to produce the TAO, (tactical auxiliary oiler)?

ANSWER: National Steel and Shipbuilding Company (NASSCO) was underbid by two other firms in the competition for building the FY 1985 fleet oilers.

QUESTION: I am considering amending the FY 1986 Defense Authorization Bill with the National Shipbuilding Industrial Base Amendment, which would require at least some naval combatant and auxiliary shipbuilding on the Pacific Coast. Without this amendment, is there any likelihood that there will be any combatant or auxiliary construction on the West Coast?

ANSWER: Since 1981, there has been a number of new construction ships and conversions awarded to Pacific Coast yards including:

FFG 7 class new construction ships
LSD 41 class new construction ships
TAGOS 1 class new construction ships
ARDM new construction dry dock

SWCM (ex-PBM) lead craft new construction
Battleship conversions
TAKR ship conversions
TAH ship conversions
TACS ship conversions

An amendment requiring some naval combatant and auxiliary shipbuilding on the Pacific Coast is unnecessary. In addition, to these new construction ships many navy ships are repaired and maintained on the Pacific Coast funded by Navy Operations and Maintenance funds.

QUESTIONS SUBMITTED BY SENATOR KASTEN

MCM

QUESTION: The Lead Contractor for the MCM Program currently has 900 workers (600 employees, 300 contracted out) all operating on Navy contracts. By this September four YP's and 2 ARS's will be ready for delivery. At that time 600 workers will become available to manage new contracts. Unfortunately a majority of these people are multi-capable in the trades that they provide. They will find work. But it will be in other areas outside of shipbuilding. Again, our industrial base will suffer. Even if they receive half of the 1985 award, they will still lose the same amount of employees because of more deliveries in 1986. The Senate Armed Services Committee recommended funding for 2 ships in that year. What additional layoffs could we expect if this recommendation is appropriated?

ANSWER: If only two (2) ships are appropriated in FY86, they would be competed between Peterson Builders and Marinette Marine. Either shipbuilder could receive zero (0), one (1) or two (2) ships. The Navy cannot predict how a shipbuilder will manage his workforce in the face of declining workload. The number of employees to hold in order to get new business, whether Navy or commercial is a business decision. Either shipbuilder would be expected to layoff some employees.

QUESTION: What effect would this delay have on the program as a whole?

ANSWER: If only two (2) ships were appropriated in FY86, the other two (2) requested FY86 ships would be reprogrammed, probably to FY87. A total force level of fourteen ships is the Navy's requirement. The reduction of two (2) ships in FY86 would result in further delay in the deployment of these vitally needed ships.

QUESTIONS SUBMITTED BY SENATOR STENNIS

BIDDING PROCEDURES FOR SHIP REPAIR CONTRACTORS

QUESTION:

". . . the Navy is directed to take appropriate action to prevent keen competition from becoming low-balling, and provide to the Committee on Appropriations an analysis of the extent to which such activity is taking place and the adverse impact which results."

ANSWER:

The Navy is preparing the requested analysis of the extent and impact of low-balling in ship repair work. When the analysis has been completed, it will be submitted to the Congress. Submission of the analysis within 120 days is anticipated.

QUESTIONS SUBMITTED BY SENATOR BYRD

Senator Byrd: Mr. Secretary, as you recall, I sponsored an amendment to the FY 1985 Defense authorization bill to establish a Commission on Merchant Marine and Defense. This amendment was adopted by a roll call vote of 80 yeas to 5 nays on June 15, 1984. It was the intent of the legislation that the Commission study the problems relating to the transportation of cargo and personnel during a time of war or national emergency. The Commission was to address the capability of our merchant marine to meet those transportation needs, and the adequacy of the shipbuilding and repair base in the United States.

Furthermore, it was intended that the Commission match up the trends in our maritime resources with the objectives laid out in the annual report to the Congress by the Secretary of Defense.

Based on the results of the study, the Commission would be directed to make specific recommendations to the Congress, the Executive Branch and the private sector.

The goal of the Commission would be to define what is appropriate to foster and maintain a U.S. merchant marine capable of meeting national security requirements.

The Commission would be composed of five members, including the Secretary of the Navy, the Administrator of the Maritime Administration, and three members appointed by the President of individuals of stature in the fields of merchant-ship operations, shipbuilding, steel industry, maritime labor and defense matters who would be particularly suited to serve on the Commission.

All of this is consistent with my belief that a strong industrial base, and a strong steel industry as a central part of that base, is essential to our national security.

Mr. Secretary, what is the status of the Commission and what are the significant milestone events leading to the full realization of the work of the Commission.

Mr. Pyatt: Nominations for the five appointed Commission members have been provided to the Office of the President.

The Defense Authorization Act for FY 85 established the Commission, but the Defense Appropriation Act for FY 85 did not appropriate the necessary funds. Establishment and organization of the professional staff of the Commission is pending the appropriation of the funds. The following milestones are based on the date that funding is received:

Select and organize professional staff	+60 days
Initial report of finding of facts	+ 9 months
Initial report of recommendations	+12 months
Final report of facts	+21 months
Final report of recommendations	+24 months
Commission stand-down	+27 months

Mr. Pyatt: The Commission was authorized in the FY 1985 Defense Authorization Bill, but the necessary funds that were authorized were never appropriated. I am hopeful that will be corrected in the FY 1986 appropriation, but in the meantime we are doing as much as we can legally without that funding.

To begin with, we selected a Navy Captain with experience in managing these types of studies to act as Chief of Staff. He was recommended by General Abramson for whom he served as Chief-of-Staff at NASA. He in turn has identified personnel from MARAD and MSC who will join us to begin the data gathering portion of the study when appropriate. He has also identified potential office space for the Commission.

The Navy also forwarded a recommended list of Commission members through Department of Defense to the White House.

In summary, we have proceeded as far as we can legally, and we await full appropriation of the authorized funds to proceed with the Commission. Moreover, we seek an extension of the deadlines for the reports of the Commission because of the delay. We ask that the first report would become due one year after the enactment of the appropriation of the funding for the Commission, and that each of the other reports would follow in their current sequence.

SSN ADVANCE PROCUREMENT

QUESTION: Of the $585.2 million budgeted for SSN 688 submarine advance procurement to support 1987 and 1988 ships, $98.8 million is requested for contractor furnished material. Congress has not made a practice of approving long lead funds for shipbuilders' material. Why should we make an exception in this case?

ANSWER: The long lead funds requested for shipbuilder material are required to maximize the benefit derived from current shipbuilder construction techniques which use pre-outfitting concepts. This material is necessary to minimize current shipbuilder construction schedules and ultimately reduce overall construction costs. Congress has approved AP for contractor furnished material in the past (LHD, LCAC, LSD, for example) in order to meet cost effective ship delivery dates.

QUESTION: The Navy's justification for the $98.8 million request is long lead funds permit the Government to take advantage of new techniques developed by shipbuilders to accelerate delivery schedules. After discounting for shipyard strikes and the like, submarine construction over the past 10 years required about 70 months per ship. What kind of improvement in construction time is expected if the long lead request is approved?

ANSWER: Current Navy projected schedules reflect construction times of 54 to 61 months. If full utilization of pre-outfitting is realized, the Navy believes that a 45 to 50 month construction schedule is ultimately achievable.

QUESTION: The four ships requested in the 1986 budget are estimated to be constructed within 54-61 months. This improvement of 10-15 months is expected, although no long lead funds are available for contractor furnished material on these ships. Aren't we getting the desired improvements without advance funding for such material?

ANSWER: Only partially. Further reduction of the construction interval is considered possible if selected material availability constraints can be removed.

QUESTIONS SUBMITTED BY SENATOR HATFIELD

Question: Secretary Lehman recently announced that all overhauls will be contracted on a fixed price basis. This effectively ends the use of cost plus type contracting for ship overhauls. Secretary Pyatt, what led the Navy to this position? Are you estimating any savings from this action?

Answer: Competition is at the core of our efforts to reduce maintenance costs. Increased competition and stability in our overhaul program has led us to share risk with our contractors rather than the Navy assuming all the risk. The fixed price type contracts will share the risks and produce savings for the Navy. We expect substantial savings, but it is difficult to estimate the magnitude because the effects of competition on the market place do not lend themselves to accurate analysis.

Question: We're told that the Navy's position is use "fixed price incentive" type contracts rather than "firm fixed price." Explain the difference between these contract methods and the rationale for selection of this alternative?

Answer: Firm fixed price provides for only a single contract amount. If the contractor is able to fulfill the contract requirements at a lesser cost, he keeps all the profit. Similarly, if he over runs, he must absorb all the losses. A fixed price incentive contract provides for a sharing of risk, both under runs and over runs. The contractor is offered an incentive to reduce costs, improve schedule or achieve other desired results.

Question: While there may be advantages to the fixed price contract methodology, the application of this principle in fiscal 1986 is limited -- only 35 overhauls are planned for next year which is a decrease of 20 from the current program. At the same time we're seeing the decrease in regular overhauls, there is a large increase in the short term shipyear work packages called SRAs from 92 to 102 and a much greater dependence on phased maintenance rather than overhauls. Are these ship maintenance programs also covered under the Secretary's fixed price edict?

Answer: We expect to be able to fix price the actual repair work in the Phased Maintenance Availabilities, but continue to do the less defined planning on a cost plus basis.

Question: There are some who believe that fixed price contracting is conducive to "buy-in." Contract bids are offered below the program estimate, yet higher costs are recovered through change orders. How prevalent do you think this practice is and how can it be controlled?

Answer: There have been some instances where contractors have "bought-in" in hopes of recovering losses on contract changes. I do not believe the practice is widespread. The practice is best combatted by insisting that the contractor perform as required at the agreed to price.

Question: The Navy is currently contemplating whether to expand the 50 mile restriction in the bidding area for phased maintenance repairs on the West Coast. Please explain why the Navy would not want to promote increased competition in the ship repair industry in the Northwest by so expanding the bid area for phased maintenance.

Answer: We are reviewing our bid areas for Regular Overhauls and the shorter Phased Maintenance/Selected Restricted Availabilities. In this review, we will be balancing an expansion of the bid areas to increase competition, with our desire to keep the ships near their homeport in order to keep our crews near their families.

Question: At the request of the Senate last year (Military Construction Report), the Navy has recently completed its report on dispersing several MSH Hunter class minesweepers to alternative ports in Oregon and Washington State. Is the Navy still planning, in fact, to disperse to alternate sites? When will a decision be made as to where those MSH vessels will be homeported?

Answer: A decision was made on Wednesday, 17 July 1985, to homeport two MSH-1 "Cardinal" class minesweeper-hunter ships in Astoria, Oregon.

SUBCOMMITTEE RECESS

Senator RUDMAN. The subcommittee will now stand in recess to the call of the Chairman.

[Whereupon, at 11:45 a.m., Tuesday, April 16, the subcommittee was recessed to reconvene at the call of the Chair.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 1986

THURSDAY, MAY 2, 1985

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10 a.m., in room SD-192, Dirksen Senate Office Building, Hon. Ted Stevens (chairman), presiding.

Present: Senators Stevens, Andrews, D'Amato, Rudman, Proxmire, Chiles, and Sasser.

DEPARTMENT OF DEFENSE

DEPARTMENT OF THE NAVY

RESEARCH, ENGINEERING AND SYSTEMS

STATEMENT OF MELVYN R. PAISLEY, ASSISTANT SECRETARY OF THE NAVY (RESEARCH, ENGINEERING AND SYSTEMS)

ACCOMPANIED BY:

- VICE ADM. EDWARD H. MARTIN, DEPUTY CHIEF OF NAVAL OPERATIONS (AIR WARFARE)
- LT. GEN. K.A. SMITH, U.S. MARINE CORPS, DEPUTY CHIEF OF STAFF FOR AVIATION
- RICHARD RUMPF, DEPUTY ASSISTANT SECRETARY FOR AIR WARFARE, ADMIRAL BUSEY

NAVY AIRCRAFT PROCUREMENT AND RELATED RESEARCH AND DEVELOPMENT

BUDGET REQUEST

Senator STEVENS. Good morning.

Gentlemen, we are here today to review the Navy's fiscal year 1986 budget request for aircraft procurement and related research and development. The $12.1 billion procurement request is $1.6 billion more than the appropriated level for fiscal year 1985.

The Navy's plan is to procure 322 aircraft which is 23 in excess of the 299 aircraft approved last year, which is the primary part of this request. In addition, the Navy seeks more than $1.5 billion for research and development to support future aircraft programs.

The fiscal year 1986 budget reflects a relatively stable, level continuation of last year's production rates with some exceptions. The major new procurement start proposed in the budget is the E-6A strategic communications aircraft to replace the EC-130's. This program involves highly classified issues and will have to be addressed separately in the future. We will have a separate hearing.

The other primary new start is the VH-60A carrier based helicopter program.

In addition to these procurement programs there are several developmental efforts underway with substantial budget increases for a variety of future aircraft programs.

In view of the mounting congressional pressure to reduce the Defense budget, although I am reluctant to say it, but our objective is to examine these production and development programs as well as the force level goals the Navy is using to justify the budget request. Clearly, all the requested appropriations cannot be approved under the constraints that are currently developing.

INTRODUCTION OF WITNESSES

Our witnesses today are Melvyn Paisley, the Assistant Secretary for Research, Engineering, and Systems; Vice Admiral Edward Martin, the Deputy Chief of Navy Operations for Air Warfare; and Lt. Gen. Keith Smith, the Marine Corps Deputy Chief of Staff for Aviation; Mr. Richard Rumpt, Deputy Assistant Secretary for Air Warfare, and Admiral Busey.

Gentlemen, your full statements will be printed in the record, so we ask that you summarize your remarks to permit maximum time for questions from the committee.

We will be happy to have you proceed as you wish, gentlemen.

[The opening statement of Senator D'Amato follows:]

Opening Statement of Hon. Alfonse D'Amato, U.S. Senator From New York

Mr. Chairman, I have been impressed by the Navy's increased emphasis on sound business practices in contracting, acquisition, and systems improvements. The use of common parts and subassemblies in several aircraft including the F-14 and A-6E reduces the number of parts in the supply system and the cost of inventories. The reduction of unnecessary military specifications will facilitate the interchanges of common parts, reduce costs, and will provide added flexibility during mobilization.

The formation of a Corps of Naval Career Officers permanently dedicated to the acquisition process is most encouraging. This initiative will contribute significantly to better aircraft and weapons systems, improvements to today's operational aircraft weapons systems, and overall greater military productivity.

Improvements to today's aircraft, such as better engines, and improved offensive and defensive weapons systems, are essential and must be continued. Each year our potential adversaries develop new weapons and technologies in an attempt to neutralize our aircraft strike capability. We must continue to improve our current operational aircraft, as well as develop the advanced technical aircraft required in the late 1990s.

Mr. Chairman, I would like to ask the witnesses today to highlight these improvement programs as they relate to the F-14 and A-6 aircraft programs.

Thank you, Mr. Chairman.

R&D BUDGET AREA

Mr. Paisley. Thank you, Mr. Chairman.

I have submitted a brief statement for the record. I am just going to cover a few remarks at the start. Admiral Martin then will cover portions of the programs, as will General Smith.

In the R&D area, I have been attempting to implement the Secretary of the Navy's policies that he has put in the Department in the last 4 years. We have been able to reduce the number of programs, which was an objective that he had, from 526 programs to 400 in the R&D account.

PERSONNEL CHANGES

As one of the things in terms of improving the acquisition capability within the Navy, we started over a year ago to require that all program managers stay in their position 4 years unless they have a waiver from the Secretary.

We have followed that with a new program for material professionals within the Navy and we have set up a career path leading to over a hundred billets for Admirals in the acquisition process. We are going to require that civilians in equivalent levels in the SES community move at least every 5 years.

This will require military people to stay longer in billets and civilians to move a little more often. We think that that will lead to improvements in some of the issues that are propagated by a bureaucratic structure.

CONTRACT REFORM

In regard to contract reform, the Secretary has continued to press us in the R&D community to fixed-price contracts whenever it is sensible. We have fixed-price contracts on the F-14D, A-6F and the T-45. That has saved over $700 million in those programs while maintaining the warfighting and training capability.

COMPETITION

I firmly believe that competition starts in R&D and we have continued to try to put more and more programs into competition early in the program.

On the JVX, the V-22 OSPREY program as it is known now, we have competition from the start to the end. We are going to go into production with two competing companies.

Our advanced aircraft program, the ATA, is going to be structured the same way.

I personally do not see why any aircraft program starting from scratch should ever wind up with one contractor Hindsight tells me we could have done that on the F-18. So, in the future, we are going to try to prevent having ourselves in a position where we only have one contractor.

I think those initiatives are paying off and will pay off in the future.

NON-COMPETITIVE CONTRACT PROGRAMS

Now I will tell you a little story about a side issue. You can't always compete programs. Sometimes there are cases when you will say I cannot compete. We have a program called SLAT, supersonic low altitude target program. We got a fixed-price R&D program and 3 years of fixed-price options. The conditions were that that program would go into competition and the contractor was to come back and lay out a competitive plan for it.

The contractor pointed out that 70 percent of the program was in the hands of subcontractors. I told the contractor that if he would compete that 70 percent every year and take that improvement, that competition would yield and reduce our fixed-price contract in the production option by that amount, plus agreeing to take his portion of the contract and follow the same learning curve of this competed portion for his 30 percent of the price and reduce his contract to us, then we wouldn't have to compete it for the prime.

This is the first time we have done that. I think that when you have a large amount of subcontracting this approach will get you a forceful pressure on the prime contractor to reduce his portion. That puts him on a learning curve that is generated by the pressures of subcontractor competition.

I think in the future you will see more of this kind of competition.

ACTIVITY OF R&D PROGRAMS

I personally think that R&D programs should have a level of effort activity up to full-scale engineering development. That level of activity should be defined specifically so that no overruns are possible. This is because it is the level of effort we say it is, and as you go into full-scale engineering development in most cases, you should fix price.

FIXED-PRICE OPTIONS

By the middle of full-scale engineering development at the latest you should get at least 3 years fixed-price option out of both contractors. Then as you go out on full-scale engineering have competition between the contractors or have fixed price options in hand.

We need to fix prices more. If the program is so risky that you can't fix prices as you go into full-scale engineering development, then you ought to ask the question of yourself, is the requirement such that I must go at risk and consciously know that you are going at risk on the program because you couldn't fix price and you have a cost risk in it, but don't do it by just saying you have it.

I think that there ought to be a small number rather than a large number, which it is now. We are going to come back and review all the programs from that viewpoint.

With that, I would like, if I could, to pass the microphone to Admiral Martin to have him talk to you specifically about some of our air programs.

[The statements of Mr. Paisley follow:]

MELVIN R. PAISLEY
ASSISTANT SECRETARY OF THE NAVY
(RESEARCH, ENGINEERING AND SYSTEMS)
EXECUTIVE SUMMARY STATEMENT

INTRODUCTION

The President has emphasized the importance of maritime power to this Nation. Research and development in support of the weapon acquisition process is the cornerstone of the modernization of our naval forces. The successful results of numerous research and development programs are now entering the fleet and improving our capabilities in all areas. Our efforts are focused to stay ahead with acquisition programs such as the new aircraft V-22A OSPREY, formerly called JVX; MK-48 ADCAP torpedo, the newest version of our submarine-launched torpedo; and the Advanced Tactical Aircraft (ATA). We are also supporting real growth in our research and exploratory development programs which are the seedbeds for break-throughs in advanced technology and become the revolutionary developments of the future.

BUDGET OVERVIEW

My challenge in managing our Navy's R&D program is to use our nation's technological capabilities to meet the fleet's needs at the lowest possible cost and in a balanced, prudent way. Our request for $11.3 billion is approximately 10.8 percent of the Navy's Total Obligational Authority, a level we feel is necessary to support our Navy and Marine Corps with modern platforms and weapons. Our technological lead today is a product of the emphasis placed on R&D budgets and programs in the 60's and 70's. However, this advantage is being seriously challenged by our adversaries. Consequently, our future posture and security will depend heavily upon how we respond to this challenge.

Money is spent for three major activities: The Technology Base (Basic Research and Exploratory Development), Development (Advanced Development, Engineering Development and Operational Development), and Management Support. The Technology Base is 7.6% of the overall R&D program. It provides fundamental knowledge and new technologies that find a wide range of applications and generate concepts for new systems. The largest share of resources, 86.9% is devoted to the development of platforms and weapon systems. The remaining 5.5% is used to pay for management support in the operation and maintenance of R&D ships and aircraft, test ranges, laboratories, facilities, and other areas necessary to support our RDT&E programs.

MANAGEMENT OVERVIEW

We are continuing the management reforms initiated early in President Reagan's first term to reduce the time and costs of acquiring new systems. I am happy to report that we are realizing a greater payoff from these changes each year as the reforms are better understood at all levels, as practices fall into line with the new policies, and as the benefits become increasingly clear and generate additional support for the changes. The most important changes that are occurring, I believe, are the changes in attitudes that come with success: with the realization that acquisition program costs and risks can be substantially reduced by scrubbing requirements more thoroughly at the outset; by making industry a partner in this process; by introducing more competition in our acquisition programs; by exercising more discipline over the control of proposed changes; and by holding Program Managers and contractors responsible for the quality of the products they deliver.

You need only read the defense trade journals, newsletters, recent speeches of industrial leaders, and our latest System Acquisition Reports (SARs), to know that our management reforms are taking hold, that they are bearing fruit, and that industry is responding positively to these reforms.

Let me tell you now more about our progress in reducing the total number of our development projects; about the steps we have taken to make program management a more attractive career path both for officers and civilians; about the emphasis being placed on introducing and maintaining additional competition in our acquisition programs; and about some other changes in our contracting policies and practices.

Program Reduction. We continued to weed out lower priority programs, to be more selective in approving new starts, and to reduce the total number of developments being supported at any give time. To avoid program stretch-outs, instabilities, and cost growth, we will pursue only those projects that are both highly promising and can be fully and efficiently funded. Over the past four years we have worked hard to stop the proliferation of projects and to reduce the number of projects in our five year plans. I believe we have struck a sound balance between the number of development projects we are pursuing and our ability to carry them out efficiently and successfully. Only the strongest and highest priority programs have survived this intensive scrubbing. The following table indicates the results of this persistent management initative:

Navy R&D Programs
FY 83 - FY 86
(Highly Classified Projects Excluded)

Year	Number of Projects
FY 83	526
FY 84	496
FY 85	410
FY 86	400

Program Management Reform. Without experienced managers cost reduction initiatives cannot achieve their full potential. With this in mind, we have developed a new concept for a corps of Navy professionals dedicated to the management of R&D, acquisition, maintenance and readiness efforts. We want to ensure that such a career path is both an attractive one for our officers and one that will provide the education, experience, and incentives they need to become capable professionals in dealing with the business community. To enhance stability and to build experience, officers assigned as program managers will be required to serve longer tours of duty, and their promotion will be based upon their ability to develop effective weapon systems that meet requirements at the lowest cost possible. Flag level billets will be opened to those who demonstrate this skill. The career management of civilian acquisition management specialists are being similarly revised.

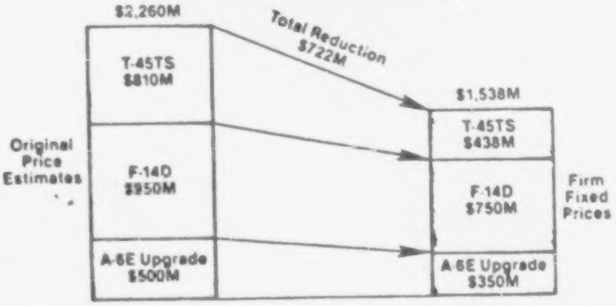
Program Management Proposals. The Navy has established a policy whereby any changes to a weapon system require a Program Management Proposal (PMP) review which ultimately is endorsed by the Secretary of the Navy. This policy has been in effect in our air warfare for some time and we have broadened its authority across all programs. These steps are being taken to ensure that programs are kept within guidelines and are only allowed expansion following SECNAV approval. The results of this initiative are already surfacing as we find fewer programs unnecessarily escalating in cost.

Competition. Competition has reduced and will continue to reduce our costs and result in other benefits as people are motivated to work harder and smarter. We seek true competition, not merely the appearance of competition and the award of a production monopoly. The Secretary of the Navy has established a policy of acquiring second sources for every program of appropriate size. I will back that policy by acquiring other sources as early in the life of each program as can be reasonably accomplished. There has been a tendency to think that competition could not be maintained in the complex arena of R&D beyond the early design phase. On the contrary, I continue to find that early and continuing emphasis on competition pays handsomely.

The cornerstone of acquisition theory is the effective application of competition in program life-cycle management. Competition can, and is being introduced into every phase of major systems development and acquisition with programs being subjected to competition from development to testing through full-scale production. Each phase is scrutinized for cost savings through tailored competition. In missile procurement alone, competition and multiple sourcing have saved millions. For example, we saved $10.5 million on one of the seven subassemblies (of which all are dual sourced) of the SIDEWINDER air-to-air missile in FY 1984. Additionally, the SIDEWINDER Program has realized significant savings by requiring competition at the subcontractor level. In the HARPOON missile program four of the six subassemblies are dual sourced resulting in a $36 million dollar savings in FY 1983. In 1984, we selected a second source for the VLS system, and initiated action to establish second sources for the SM-2, F-404 engine, Osprey, Aegis and the Rolling Airframe Missile. We also made the decision to compete the PHOENIX. Since 1981, we have raised the number of competitively awarded programs from 25 to 37 percent of the total Navy procurement dollars. Competition is a powerful economic force. We have found it not only results in weapons at considerably less cost, but also gets them earlier and at the same time expands our industrial base. We are witnessing a burst of competitive innovation as more vendors vie for our business. There is room for much more competition, we need more competition, and we intend to push for it.

Contracting. We are also saving money by improving our contracting practices. We are increasing the use of fixed price contracts, reducing the number of contract changes, and requiring warranties in every possible case. Furthermore, it is good business sense to use common parts and subassemblies wherever possible. We are taking advantage of this practice in a number of programs, including the F-14, A-6, and AV-8B. Furthermore, we have just produced a new management plan to drive our attack on "gold plating". The Secretary of the Navy has appointed a "Streamlining Advocate General" to ensure this plan is implemented. As part of this effort, we have been able to cut out unnecessary military specifications by leaving it to industry to find the best way to meet our requirements. By specifying exactly what we need, and no more, and by resisting the tendency to make improvements during construction, we have been able to move away from cost-plus to firm fixed-price and fixed-price incentive contracts. There are three shining examples of our application of these techniques in the F-14 and A-6 upgrades and the T-45 Trainer (VTX-TS). The numbers tell the story: a $722 million saving.

Development Costs
(FY 84 Dollars in Millions)



I would now like to report on the Navy's R&D in Air Programs.

AIR PROGRAMS

OVERVIEW

Extraordinary attention and effort have been devoted to our RDT&E plans and acquisition programs because of the magnitude of the challenges confronting us, and because of the necessity of attaining our goals as efficiently and economically as possible. It is perhaps no overstatement to say that we have applied the new acquisition mangement policies more intensively, vigorously, and successfully in the Air R&D area than any other to date. As each major program has come up for review and milestone decisions, we have taken great pains to increase competition; to reduce acquisition costs and risks by tailoring and streamlining requirements and specifications; to promote commonality among aircraft and weapon systems; to press for more fixed price developments to prevent cost growth; to discipline proposed changes in these contracts; and to establish second production sources for weapon systems or subsystems.

In FY 1984 and FY 1985 a major thrust of the RDT&E air programs was to achieve commonality objectives which lead to cost avoidance. A-6F and F-14D projects are good examples of related accomplishments. The avionic improvements to both aircraft share over eighty percent subsystems and software commonality is also being pursued in the AV-8B and F/A-18 night attack programs thereby saving on acquisition and support costs.

With respect to aerial targets, last year the Navy very successfully qualified the interim supersonic low altitude target (VANDAL-Extended Range) at two launch sites (PMTC and Wallops Island). In addition, we successfully competed and awarded a fixed price R&D contract, which includes firm fixed price production options, for the future supersonic low altitude target (AQM-127A). This target will be available in FY 1990 for R&D testing.

We continue to reap the benefits of our efforts to streamline system requirements in missile and aircraft systems. These actions are best seen by the record the Secretary of the Navy has established in the continued decrease in the fly away unit costs of our tactical aircraft and missile system during the last four years.

Having previously described some of our recent accomplishments in this area, I would now like to say a few more words about our FY 1986 proposed F-14, V-22 Osprey (JVX), A-6 and ATA aircraft developments; unmanned air vehicles; the T-45 Training Systems; our missile programs; Aerial targets; and NACES.

PROGRAM HIGHLIGHTS

F-14 UPGRADE. We have a firm fixed price contract for the F-14 upgrade, which will include new engines, radar improvements, infrared search and track, and avionics architecture changes, which insure commonality of operations and support with fleet aircraft and ships employing JTIDS, ASPJ, ALR-67, and AMRAAM. This upgrade will increase the F-14's performance against the projected threat into the twenty-first century.

V-22A(JVX). As previously mentioned, we are proceeding into FSD with the V-22A OSPREY. This program exploits a true technological breakthrough in aircraft design. The V-22A will combine the hover capabilities of a conventional helicopter with a turbo prop's speed, range and payload. The aircraft will not only be capable of vertical take-off and landing but will have a 250 knot cruise speed and global self-deployable range. Our V-22A program will deliver over 900 of these tilt-rotor transports to the Services, meeting Marine Corps assault, Air Force special operations, Navy combat SAR and Army combat support mission requirements.

A-6E IMPROVEMENTS. The present A-6E aircraft are not adequate to meet the Navy's all-weather requirements in the 1990's. We need to improve their survivability, reliability and maintainability for sustained warfighting capability, while reducing their life cycle cost. We also must address inventory shortfalls.

We have an A-6 improvement program in full-scale development under a fixed price RDT&E contract, which addresses these needs. This contract is being executed in conjunction with a similar contract for the F-14D development on a program cost sharing basis. The A-6F will have improved thrust engines, common to the F/A-18, digital avionics with maximum commonality to the F/A-18, F-14D and AV-8B, and a new high resolution radar for standoff targeting.

The program includes integration of various air-to-surface standoff weapons, defensive electronics countermeasures, Halon inert fuel system in the event of fire or battle damage, improved radios for increased reliability and maintainability, and the secure HAVE QUICK capability.

With regard to A-6 inventory shortfalls, we plan for A-6F procurement in FY 1988-93, with first delivery commencing in 1990. To meet the requirements for improved survivability and enhanced reliability and maintainability in the 1990's, a number of A-6F's built prior to FY 1988 will require modification to the full A-6F configuration and we are now in the process of specifying and costing this effort.

ADVANCED TACTICAL AIRCRAFT (ATA). We are planning to replace the A-6 in the late 1990's. The replacement aircraft, designated the Advanced Tactical Aircraft, will also contribute to fleet air defense and electronic warfare operations, greatly increasing our warfighting flexibility. Emphasis will be placed on high payoff technology and specific ATA concept studies by major aerospace firms. We are staffing a Memorandum of Understanding with the Air Force to ensure maximum commonality with the Air Force's Advanced Tactical Fighter and to share the burden of developing advanced integrated avionics and weapons systems.

UNMANNED AIR VEHICLES: We have significantly increased activity in the areas of Remotely Controlled Vehicles (RCV's) and decoys. We initiated rapid action to develop competitively RCV's that meet USN and USMC operational requirements for various missions. The Navy will take the lead in DoD for development of low cost RPVs for reconnaissance and targeting. In addition we intend to procure competitively additional decoys as quickly as possible.

T45TS. We are in the final stages of contract definitization for full scale engineering development of our T-45 Training System. This contract calls for the development of a integrated undergraduate jet flight training system consisting of the T-45 aircraft, flight simulator, academic courseware, computer aided instruction, and a training integration system.

HARM/LOW COST SEEKER/ARM PROGRAMS. The HARM weapon system is in its third year of production, second year of fleet use with the A-7 aircraft, and first year introduction on the F/A-18. The fleet is impressed with its performance, reliability, and maintainability. We are integrating HARM capability in the A-6, along with other standoff weapons. Due to the excellent efforts of the Naval Material Command and commitment by Texas Instruments, the total HARM program cost projection is now 30% lower than our projections of two years ago. We are aggressively developing a reduced cost seeker for HARM to continue to gain benefits of competition and increase the Anti-Radiation Missile industrial base. This seeker will also have application in other weapons.

In concert with other services, we have prepared a comprehensive Anti-Radiation Missile "Roadmap" to chart our course for future ARM requirements, and to ensure joint programs where there are sufficient common requirements and cost effective solutions.

AERIAL TARGETS. The development of high performance targets for our test program continues at an accelerated pace to provide the most complete weapon systems testing possible. The VANDAL (ER) program, a supersonic sea-skimmer, is now operational on both coasts and came in on time and on cost. The contract for the BQM-126A, low cost follow-on to the BQM-34, was competitively awarded in September 1984. The Supersonic Low Altitude Target (YBQM-127A) contract was also awarded in September 1984.

NACES (NAVY AIRCREW COMMON EJECTION SEAT). The ejection seat is the primary means of aircrew escape from disabled aircraft. Current tactical aircraft ejection seats are procured sole source on an annual basis with each type aircraft having a different model ejection seat. In FY 1984 we initiated a program to acquire a common seat that is procured competitively on an annual basis. Commonality will provide benefits in safety, training and maintenance costs and lower cost due to competition. In addition, there will be greater competition in the area of spares and consumable parts for this system. Our program to develop a Navy Aircrew Common Ejection Seat (NACES) for use in the F/A-18, TF-18, T-45, F-14D and improved A-6E aircraft is progressing well since its start in FY 1984. We are evaluating several responses to our Request for Proposals on a single seat design. We will use a leader follower concept to co-produce the Navy Aircrew Common Ejection Seat and further reduce its cost.

MELVIN R. PAISLEY

ASSISTANT SECRETARY OF THE NAVY

(RESEARCH, ENGINEERING AND SYSTEMS)

PREPARED STATEMENT

INTRODUCTION

Mr. Chairman and members of the Committee, I am pleased to appear before this subcommittee again to present the Navy's FY 1986 Research and Development program and budget. With me today at the table are: Vice Admiral Albert J. Baciocco, Jr., United States Navy, Director, Research, Development, Test & Evaluation for the Chief of Naval Operations; Brigadier General Raymond M. Franklin, United States Marine Corp, Deputy Chief of Staff for Research, Development and Studies; and Mr. Gerald A. Cann, my principal deputy.

The President has emphasized the importance of maritime power to this Nation. Research and development in support of the weapon acquisition process is the cornerstone of the modernization of our naval forces. The successful results of numerous research and development programs are now entering the fleet and improving our capabilities in all areas. Our new AEGIS ship combat system, TOMAHAWK Anti-Ship Missile, improved acoustic processors used in our ASW patrol aircraft, and the Vulcan Phalanx Close-In Weapons Systems are a few examples of those products. Our efforts are focused to stay ahead with acquisition programs such as the new logistics aircraft V-22A OSPREY, formerly called JVX; MK-48 ADCAP torpedo, the newest version of our submarine-launched torpedo; and the Advanced Tactical Aircraft (ATA). We are also supporting real growth in our research and exploratory development programs which are the seedbeds for break-throughs in advanced technology and become the revolutionary developments of the future. One area of development which I can point to with pride is in submarine technology. The R&D efforts of our Navy's newest, and to date most advanced nuclear submarine, the SSN-21 will prove to the world the value of a technically advanced submarine force. Surveillance and survivability are excellent examples of areas where important scientific phenomena can be harnessed to increase our future maritime strength.

For me personally, these past four years have been a unique challenge as I have attempted, with your support, to match the urgent needs of our Navy and Marine Corps with the capabilities of our industry and the resources provided for our national defense. I would like to give you an overview of our budget and program; to describe some of the management initiatives that are improving our operations; to highlight some of our major programs accomplishments of the past year; and to describe the capabilities we are developing for our various mission areas.

BUDGET OVERVIEW

My challenge in managing our Navy's R&D program is to use our nation's technological capabilities to meet the fleet's needs at the lowest possible cost and in a balanced, prudent way. Our request for $11.3 billion is approximately 10.8 percent of the Navy's Total Obligational Authority, a level we feel is necessary to support our Navy and Marine Corps with modern platforms and weapons. Our technological lead today is a product of the emphasis placed on R&D budgets and programs in the 60's and 70's. However, this advantage is being seriously challenged by our adversaries. Consequently, our future posture and security will depend heavily upon how we respond to this challenge.

Money is spent for three major activities: The Technology Base (Basic Research and Exploratory Development), Development (Advanced Development, Engineering Development and Operational Development), and Management Support. The Technology Base is 7.6% of the overall R&D program. It provides fundamental knowledge and new technologies that find a wide range of applications and generate concepts for new systems. The largest share of resources, 86.9% is devoted to the development of platforms and weapon systems. The remaining 5.5% is used to pay for management support in the operation and maintenance of R&D ships and aircraft, test ranges, laboratories, facilities, and other areas necessary to support our RDT&E programs.

I would now like to report on some of the major management initiatives we are pursuing to ensure that every R&D dollar is invested wisely and yields a high return.

MANAGEMENT OVERVIEW

We are continuing the management reforms initiated early in President Reagan's first term to reduce the time and costs of acquiring new systems. I am happy to report that we are realizing a greater payoff from these changes each year as the reforms are better understood at all levels, as practices fall into line with the new policies, and as the benefits become increasingly clear and generate additional support for the changes. The most important changes that are occurring, I believe, are the changes in attitudes that come with success: with the realization that acquisition program costs and risks can be substantially reduced by scrubbing requirements more thoroughly at the outset; by making industry a partner in this process; by introducing more competition in our acquisition programs; by exercising more discipline over the control of proposed changes; and by holding Program Managers and contractors responsible for the quality of the products they deliver.

You need only read the defense trade journals, newsletters, recent speeches of industrial leaders, and our latest System Acquisition Reports (SARs), to know that our management reforms are taking hold, that they are bearing fruit, and that industry is responding positively to these reforms.

Let me tell you now more about our progress in reducing the total number of our development projects; about the steps we have taken to make program management a more attractive career path both for officers and civilians; about the emphasis being placed on introducing and maintaining additional competition in our acquisition programs; about some other changes in our contracting policies and practices; and about some of the highlights of the tests and evaluations of the past year.

Program Reduction. We continued to weed out lower priority programs, to be more selective in approving new starts, and to reduce the total number of developments being supported at any give time. To avoid program stretch-outs, instabilities, and cost growth, we will pursue only those projects that are both highly promising and can be fully and efficiently funded. Over the past four years we have worked hard to stop the proliferation of projects and to reduce the number of projects in our five year plans. I believe we have struck a sound balance between the number of development projects we are pursuing and our ability to carry them out efficiently and successfully. Only the strongest and highest priority programs have survived this intensive scrubbing. The following table indicates the results of this persistent management initative:

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FY 83 - FY 86
(Highly Classified Projects Excluded)

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FY 86	400

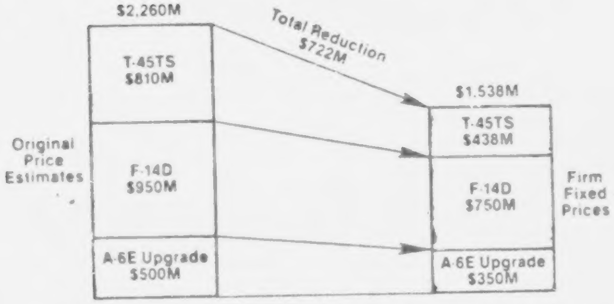
Program Management Reform. Without experienced managers cost reduction initiatives cannot achieve their full potential. With this in mind, we have developed a new concept for a corps of Navy professionals dedicated to the management of R&D, acquisition, maintenance and readiness efforts. We want to ensure that such a career path is both an attractive one for our officers and one that will provide the education, experience, and incentives they need to become capable professionals in dealing with the business community. To enhance stability and to build experience, officers assigned as program managers will be required to serve longer tours of duty, and their promotion will be based upon their ability to develop effective weapon systems that meet requirements at the lowest cost possible. Flag level billets will be opened to those who demonstrate this skill. The career management of civilian acquisition management specialists are being similarly revised.

Program Management Proposals. The Navy has established a policy whereby any changes to a weapon system require a Program Management Proposal (PMP) review which ultimately is endorsed by the Secretary of the Navy. This policy has been in effect in our air warfare for some time and we have broadened its authority across all programs. These steps are being taken to ensure that programs are kept within guidelines and are only allowed expansion following SECNAV approval. The results of this initiative are already surfacing as we find fewer programs unnecessarily escalating in cost.

Competition. Competition has reduced and will continue to reduce our costs and result in other benefits as people are motivated to work harder and smarter. We seek true competition, not merely the appearance of competition and the award of a production monopoly. The Secretary of the Navy has established a policy of acquiring second sources for every program of appropriate size. I will back that policy by acquiring other sources as early in the life of each program as can be reasonably accomplished. There has been a tendency to think that competition could not be maintained in the complex arena of R&D beyond the early design phase. On the contrary, I continue to find that early and continuing emphasis on competition pays handsomely.

The cornerstone of acquisition theory is the effective application of competition in program life-cycle management. Competition can, and is being introduced into every phase of major systems development and acquisition with programs being subjected to competition from development to testing through full-scale production. Each phase is scrutinized for cost savings through tailored competition. In missile procurement alone, competition and multiple sourcing have saved millions. For example, we saved $10.5 million on one of the seven subassemblies (of which all are dual sourced) of the SIDEWINDER air-to-air missile in FY 1984. Additionally, the SIDEWINDER Program has realized significant savings by requiring competition at the subcontractor level. In the HARPOON missile program four of the six subassemblies are dual sourced resulting in a $36 million dollar savings in FY 1983. In 1984, we selected a second source for the VLS system, and initiated action to establish second sources for the SM-2, F-404 engine, Osprey, Aegis and the Rolling Airframe Missile. We also made the decision to compete the PHOENIX. Since 1981, we have raised the number of competitively awarded programs from 25 to 37 percent of the total Navy procurement dollars. Competition is a powerful economic force. We have found it not only results in weapons at considerably less cost, but also gets them earlier and at the same time expands our industrial base. We are witnessing a burst of competitive innovation as more vendors vie for our business. There is room for much more competition, we need more competition, and we intend to push for it.

Contracting. We are also saving money by improving our contracting practices. We are increasing the use of fixed price contracts, reducing the number of contract changes, and requiring warranties in every possible case. Furthermore, it is good business sense to use common parts and sub-assemblies wherever possible. We are taking advantage of this practice in a number of programs, including the F-14, A-6, and AV-8B. Furthermore, we have just produced a new management plan to drive our attack on "gold plating". The Secretary of the Navy has appointed a "Streamlining Advocate General" to ensure this plan is implemented. As part of this effort, we have been able to cut out unnecessary military specifications by leaving it to industry to find the best way to meet our requirements. By specifying exactly what we need, and no more, and by resisting the tendency to make improvements during construction, we have been able to move away from cost-plus to firm fixed-price and fixed-price incentive contracts. There are three shining examples of our application of these techniques in the F-14 and A-6 upgrades and the T-45 Trainer (VTX-TS). The numbers tell the story: a $722 million saving.



Development Costs
(FY 84 Dollars in Millions)

Testing. Operational testing is a critical element of our decision making and the Congress has mandated important organizational changes at the OSD level to ensure that adequate attention and effort are devoted to the planning, conduct, analysis and objective appraisal of the results of operational tests of new systems before rate production is approved. Our independent testing agent, COMOPTEVFOR, continues to provide objective professional appraisals of the strengths and weaknesses of new naval systems. The AEGIS system on the TICONDEROGA class cruisers is an excellent example of a system that has been subjected to this rigorous and impartial testing. The Navy conducted both developmental and operational testing of the USS TICONDEROGA (CG-47) and the AEGIS weapon system in April 1984. The purpose of this testing was to verify the correction of deficiencies identified in previous operational testing. The testing was more comprehensive and demanding than any undertaken to date. Multiple and simultaneous attacks by unmanned targets simulating some of the world's most sophisticated anti-ship missiles were conducted. Most attacks were in a wartime jamming and chaff environment. The USS TICONDEROGA countered these attacks with live warhead missiles and a wartime firing doctrine. The AEGIS weapons system performed magnificently, destroying ten of eleven targets during operational tests and five of five targets during development tests which immediately preceded the operational phase. These tests proved that our confidence in the AEGIS weapon system was completely justified.

The testing of TOMAHAWK, the conventional land attack missile (TLAM-C), is also progressing well. Recent firings have been spectacular successes. Last summer the first end-to-end flight of a live warhead TLAM/C occurred. The missile was launched from an operational platform, flew the planned mission and destroyed the intended target.

Recently a TLAM/C was successfully launched from an operational platform, flew a representative mission inland and impacted the intended target. This DT/OT test flight was the fourth terminal dive test; terminal dive portions of tests were successful.

Other test results that deserve special mention are the recent tests of our PHALANX Close In Weapon System (CIWS). A two phase CIWS test program was conducted to stress the system and identify performance deficiencies. In the first series of tests actual anti-ships missiles were fired against a remotely controlled CIWS system mounted on the former USS STODDARD. A target was towed behind this platform. In the second phase of the tests other anti-ship missiles were fired against the CIWS and the same target. A very impressive initial score was achieved. Much was also learned from these tests, further improvements in CIWS are planned, and additional tests will be conducted in 1986.

Tests of the MK-48 ADCAP torpedo also continued during the past year with notable successes. The most unusual tests were those conducted in unusual environments. These tests produced much new and encouraging data on the passive and active acoustic homing capabilities of this torpedo. The preliminary results indicate that the ADCAP torpedo works well in these environments.

Other Major Program Accomplishments

Having outlined some of the highlights of recent test programs, I wish to say a few words about our stewardship and accomplishments in certain other high priortiy areas before moving on to our FY-86 RDT&E plans and budget requests.

The TRIDENT II (D-5) weapon system entered full scale engineering development in FY-84. Development of TRIDENT II includes the addition of a hard target kill capability through increase in throw weight and yield, and improved navigation, fire control and missile guidance. A significant development in the D-5 missile is the reentry body. Recently, two modified MK-4 reentry bodies were flown on a DASO shot. The reentry bodies encountered high altitude (40 kf) ice clouds and heavy low altitude cloud deck. These adverse weather conditions are much more representative of expected target weather than other development flights. The test RBs performed extremely well, demonstrating desired improvements.

During 1984 the full scale engineering development contracts for TRIDENT II missile have been definitized. As a result of these contract negotiations, the Navy has been able to reduce the estimated R&D costs for the weapon system by more than about 5% of the previous development estimate. The budget profile for the TRIDENT II for FY 1986 and beyond has taken this savings into account.

During the past year the nuclear land attack (TLAM/N) and the antishipping (TASM) versions of TOMAHAWK were successfully introduced into the Fleet. The initial operational capability (IOC) for TASM occurred in late November 1983 on an operational unit. The surface ship launched TASM reached IOC on an operating unit in June 1984. TLAM/N reached IOC on both submarine and surface ships in June 1984. Deployment of both TASM and TLAM/N is continuing. The conventional land attack (TLAM/C) is expected to become operational in FY 1986. The first ships and submarines to be equipped with a vertical launch (VLS) TOMAHAWK capability are currently undergoing modification and overhaul and the IOC for the VLS TOMAHAWK is scheduled for FY 1986 for surface ships and FY 1987 for submarines.

With respect to the Navy's air programs, we entered into a firm fixed price contract for the F-14D and A-6 improvements. The improvements will include new engines, radar improvements, and avionics for both aircraft. We also restructured the T45TS HAWK TRAINER program full scale development from one that would have cost over $600 million down to a $450 million, (firm fixed price contract in FY 1984 dollars), without significantly increasing the risk or giving up anything we really need.

In the JVX program, now designated the V-22A Osprey, we are about to enter full scale development. The aircraft configuration has been established in a highly successful preliminary design phase that included trade-off studies and was backed up by over 4500 hours of wind tunnel and rotor dynamic tests.

In the air weapons area, we integrated HARM in the F/A-18; successfully completed OPEVAL of the PHOENIX (AIM-54C); have taken steps to develop, competitively, a second source for the production of this missile; and have just begun production of LASER MAVERICK.

Similar progress has been made in the areas of Command, Control, Communications and Electronic Warfare. I will highlight here only a few of our recent accomplishments in EW. We conducted engineering tests on three different Off Board Deception Devices (ODDS), which indicate that we should be ready to proceed into TECHEVAL this year and OPEVAL late in FY 1986. Tests of the advanced development model of the Integrated Cover and Deception System (ICADS) were also successfully completed and indicate that this program should be ready for transition into FSED this year. The Active Electronic Buoy, a device to be used for fleet defense, has made this transition. The Chaff Buoy is farther along, undergoing TECH/OPEVAL. AIRBOC, an air deployed cartridge that generates a chaff cloud, successfully passed engineering testing and TECHEVAL. The NATO Sea Gnat cartridge, a passive rapid blooming chaff device, passed OPEVAL and was approved for rate production.

This is only a sampling of what we have done during the past year but I hope that it conveys some idea of both the intensity and success of our efforts. Now I will move on to the highlights of our program plans and initiatives for FY 1986.

FY 1986 PROGRAM HIGHLIGHTS
TECHNOLOGY BASE

OVERVIEW

It has long been national policy to offset the numerical advantages of our adversaries by maintaining a technological and qualitative superiority in areas critical to our military posture. However, it has become very clear that our adversaries have substantially reduced our margin of technological superiority in many areas through their unwavering commitments to the support of their own scientists and engineers and to the rapid exploitation of technology obtained from the West. We must, therefore, support a real increase in our technology programs, and we must stem the rapid flow of our technology to the Soviets if we are to maintain a technological edge.

I am happy to report that there is no lack of promising and exciting ideas, investigations, and exploratory developments that are competing--indeed begging--for our attention and support. We have planned a broad base of research and exploratory developments for FY 1986 with a special concentration of effort in a dozen or so areas that are expected to lead to revolutionary developments. These include programs in advanced optics, such as the development of ultra low loss glass fibers; in Very High Speed Integrated Circuits (VHSIC) applications and Very Large Scale Integrated Circuit Architecture and related software; Artificial Intelligence and Expert Systems; energetic materials and solids; robotics; MM-wave interactions and technology; ship, submarine and torpedo hydrodynamics; torpedo warhead and propulsion technology; ASW sensor technology; the welding of naval alloys; oceanographic and arctic investigations; accelerated healing of wounds; and work to improve the performance of systems in higher sea states.

The United States remains a leader in technological innovation and accomplishment. While it is important to sustain technological growth in the future, it is also critical to accelerate our technology transition process. We must ensure that available technology moves rapidly to operational capability. Last year we began to expedite the transition process for one high payoff area; fiber optics technology. As a matter of policy we now include the application of fiber optics as an issue in the DNSARC process. We are currently working on a similar transition policy for VHSIC technology.

Previous Congressional actions on our Tech Base program budget requests indicate that we need to do a much better job in explaining why these programs are so important. All of these investigations will not, of course, lead directly to new acquisition programs but the work will increase our knowledge and create entirely new options and opportunities with far-ranging implications. We need your support for this effort, and I will therefore briefly expand upon some of our Tech Base initiatives.

The Navy's research program will be expanded this year through a new initiative designed to enhance our basic science and engineering capabilities (P.E. 61103). This program is intended to benefit our in-house laboratories through fellowships, and a Young Investigator Program, as well as through increased laboratory support for multi-disciplinary research programs.

The Navy's Fellowship Program was established in 1982 as a means of increasing the supply of U.S. citizens trained in disciplines of science and engineering critical to the U.S. Navy. This program supports graduate study and research in nine major disciplines: Electrical Engineering; Mathematics; Computer Science; Naval Architecture and Ocean Engineering; Materials Science; Applied Physics; Aerospace/Mechanical Engineering; Life Sciences; and Oceanography. There are now 114 ONR Fellows. We encourage Fellows to spend one or more summers working in a Navy laboratory. This exposes the Fellows to vital naval research and provides the laboratories with an opportunity to recruit for the future. To encourage Fellows to take this opportunity, we increase the Fellow's stipend while at a lab.

In FY 1986, the Navy will make about 20 awards for independent research through our outstanding Young Investigators Program. Young Investigators are tenure tracked professors who received their Ph.D. after 1 January 1980. The minimum award is $50,000 per year for three years. In addition, we match outside support which the Principal Investigator can attract. As a special incentive for becoming involved with naval activities, we triple support on topics of direct interest to Navy laboratories. The maximum award under the Young Investigators program is $240,000. Additional initiatives are planned for the support of graduate fellowships, young investigators, and research instrumentation in FY 1986.

Our in-house laboratories apply science to warfare mission areas and transition technology to future weapons, sensors, and platforms. The deterioration of some Navy laboratory facilities over the years has prompted a vigorous program of renewal and upgrade. The construction of an Electronic Warfare facility at the Naval Research Laboratory and conversion of other aging laboratory buildings is planned.

I am particularly enthusiastic about the results of the Civilian Personnel demonstration project we have been testing since 1980 at two Navy laboratories in California. This project offers a simpler, more responsive approach to job classification and performance appraisal. The 98th Congress approved extension of this demonstration until 1990. The project eliminates civil service classification grades, and instead, places civilian employees under an innovative and flexible pay band system. Since 1980, civilian recruitment and employees and managers at the labs are more satisfied with this local control. We would like to see this exciting, successful Navy demonstration become the blueprint for federal-wide reforms in personnel management.

PROGRAM HIGHLIGHTS

Undersea Weapons and Sensors. Soviet submarine technology has provided markedly greater quieting, strengthened double hulls, higher speed, higher reserve buoyancy, and deeper operations. The largest share of our technology base program is aimed at surmounting this threat. Our 6.2 Exploratory Development program is examining new warhead concepts which is a cornerstone of the MK 50 torpedo P^3I program. This new warhead will provide the MK 50 with increased lethality, sufficient to deal with the newer, more formidable Soviet submarines. A joint program with the Department of Energy is being initiated to aid in producing the warhead technology of the next decade. Programs that will permit increased torpedo speed are being pursued vigorously.

In addition to these ASW weapons technology programs, we have focused our efforts on several sensor technology programs that will permit the U.S. to retain its acoustic advantage into the 1990's. Similarly, we are beginning the development of sensors which can be deployed rapidly to pick up and track patrolling submarines.

Conventional Strike Weapons. We need smarter standoff weapons, improved lethality, and higher kill-per-sortie ratios to counter the growing range and sophistication of air defenses and the increasing quantity of targets. Areas where technologies are being developed to meet these needs include: (1) fuzing, (2) midcourse guidance, (3) terminal seekers, and (4) warheads.

Oceanography Initiative. Knowledge of the ocean environment is critical to our naval tactical and strategic force employment. Recent technological breakthroughs in oceanography provide potential for an explosive growth of knowledge. We will take advantage of this opportunity by: (1) increasing oceanography educational opportunities within the Navy military and civilian research community, (2) improving data bases and equipment, e.g., by supporting the Navy Remote Ocean Sensing System (NROSS) and oceanographic research vessels, and (3) providing a catalyst for dynamic ocean modeling by means of the Institute for Naval Oceanography.

Last October, for the first time, an oceanographer payload specialist flew on the Space Shuttle. Since the inception of the shuttle program, the Navy has been providing oceanography training and briefings to the astronauts prior to each mission. These efforts have provided new insight into the complexity of the ocean, a complexity we have yet to fully comprehend and exploit.

The Secretary of the Navy has directed a major new thrust in oceanography to include: (1) the establishment of the Institute for Naval Oceanography, (2) expansion of graduate fellowships in ocean sciences, (3) increasing the number of academic chairs in oceanography, and (4) strengthening the ocean sciences research and exploratory development program. In 1986 we will begin new or expanded projects which include Arctic environmental monitoring and modeling, coastal processes, synthetic aperture radar remote sensing, shallow water acoustics, realtime prediction of ocean conditions, and investigations into the explosive development of storms at sea. These projects have been designed to support air, surface, and submarine operations in remote ocean regions, particularly where recent operations have highlighted deficiencies in data and enviromental support.

Advanced Tactical Aircraft (ATA). Our ATA program will explore a large number of technology areas in concert with Air Force efforts. We are evaluating related Air Force efforts to ensure the proper coordination of our initiatives in this area.

AAW. Other Tech Base programs have the goal of increasing the fleet's ability to detect, locate, and destroy enemy stand-off jammers and bombers. Improved early warning, and advanced guidance, fusing, warheads and propulsion are being developed for the outer air battle. In addition new technology to counter ship and submarine launched cruise missiles is being developed.

C^3I. We are developing command, control, communications and intelligence concepts, procedures, hardware and software to support timely decision-making and decision-execution. Our goals emphasize improved communications for submarines and aircraft; more effective command support through artificial intelligence, information management and displays; highly reliable and accurate navigation equipment; and a greater computer resource capability. We have transitioned programs from the technology base into development in several critical areas.

Again I wish to emphazise the importance we attach to this work and to solicit your support for it. Now let me move on to our development and acquisition programs.

STRATEGIC AND NONSTRATEGIC NUCLEAR FORCES

OVERVIEW

In the strategic and nonstrategic nuclear forces area we are pursuing developments and acquisitions to modernize and upgrade our Submarine Launched Ballistic Missile (SLBM) forces; to improve our strategic command, control, and communications capabilities; to develop TOMAHAWK cruise missiles capable of delivering conventional warheads; and to support the President's Strategic Defense Initiative.

PROGRAM HIGHLIGHTS

Strategic. Our Strategic SLBM program is a balance between missile and communication upgrades, which fulfill the President's requirement to modernize the strategic forces. We are budgeting a large portion of the our total R&D budget to carry out the modernization of the submarine ballistic missile system. Within this modernization program we are increasing the performance of our missile. This will provide the SLBM with a hard target capability and increase the survivability, of the already highly survivable system, by increasing the total patrol area.

The TRIDENT II weapon system entered full-scale engineering development during FY 1984. Development encompasses the addition of an accurate hard target kill capability. This capability will be achieved by increasing the missile throw weight and warhead yield, and by improving the other performance parameters.

We are achieving throw weight capability through an increase in missile propulsion. We will also improve the system accuracy through better subsystem performance and elimination of error sources throughout the missile program.

The design of the system is capable of penetrating enemy defenses today. Our budget contains funding to preserve this capability in the future.

Strategic Communications. To provide for enduring command, control, and communications we are budgeting to upgrade the Extremely Low Frequency (ELF) transmitter in Wisconsin, as well as installing a second system in Michigan. In addition, we are improving TACAMO capability through communication system upgrades and utilizing a modified replacement airframe. We are developing Strategic Security and Enduring Communications (STRATSEC) systems and pursuing technology for other connectivity improvements. These initiatives will enhance both the capability and survivability of the communication system to match the increased capabilities of the SLBM forces.

To be able to take advantage of the expanded ocean area from which the TRIDENT II missile can be launched, we are improving the TACAMO communications systems and developing alternative systems with long term survivability. Survivability considerations require multiple basing. It has been decided, therefore, to replace the existing C-130 airframe with the E-6A airframe which can cover a significant portion of the Pacific area from the West Coast. With adequate operational planning, the E-6A should help extend communication survivability.

To extend the communications survivability beyond that provided by ELF and TACAMO, we are participating in the Joint Service development of MILSTAR and other development initiatives. MILSTAR will allow significant improvements to submerged submarine communication for both strategic and tactical purposes. We are also developing survivability improvements under the STRATSEC program. These efforts are expected to provide assured connectivity.

In addition to the basic research in the communications area, we are also funding technology base programs in stellar navigation, materials technology, and ocean optics.

Together, these programs will enhance the overall capability of the Fleet Ballistic Missile System.

Non Strategic Nuclear Forces. The addition of TOMAHAWK cruise missiles to the Fleet adds to our overall deterrence and the strike capability of the Fleet. During 1984 the nuclear land attack (TLAM/N) and anti-shipping (TASM) versions of TOMAHAWK were successfully introduced into the Fleet. Employment of TOMAHAWK increases our deterrence through the dispersal of launch platforms and enables us to engage surface targets at substantial stand-off ranges. The conventional warhead missile (TLAM-C) will be produced in two types: one with a unitary warhead and attack mode options and the second with a submunition dispensing capability. We believe we will be able to introduce these TLAM-C versions into the Fleet in early 1986 and the fall of 1987, respectively.

We are proud to have the TOMAHAWK in the Fleet. We still need to improve this system. Therefore we are placing emphasis on the two conventional versions, over-the-horizon targeting and mission planning which is reflected in our budget request.

We are working on another TASM effectiveness improvement which will increase hit probability.

We have various initiatives, including the development of the relocatable, over-the-horizon radar, to improve our ability to provide our forces with timely and accurate over-the-horizon surveillance information. These improvements will enhance the over-the-horizon targeting capability for TASM. I will discuss these initiatives further under C^3I.

Information needed to guide a TOMAHAWK to a target on land is provided with the Theater Mission Planning System (TMPS). This system, the first of its type, determines the missile route and provides the digitized maps and target scenes. It requires improvement to fully support all requirements anticipated when all platforms are operational. Additionally, we are investigating techniques to simplify attack planning by providing a system to assist shipboard personnel in this task.

Strategic Defense Initiative (SDI). The Navy fully supports the President's Strategic Defense Initiative. We are providing support, through our laboratories, in basic technology and providing management expertise in program management for the Tri-Service National Laser Test Range at White Sands. We continue to examine additional areas, such as battle management, where our expertise can be used to provide guidance in one of the more complex parts of the defense problem. For example, the Navy's experience with AEGIS capable ships indicates that these ships have an extraordinary capability against missiles that might be launched from ships, submarines, aircraft, or from land.

SURFACE PROGRAMS

OVERVIEW

In the past year we have continued to emphasize improvements in our offensive stand-off capability and have also made impressive progress in our efforts to improve battle group air defense against anti-ship missiles. I have already mentioned the successful follow-on operational testing of the USS

TICONDEROGA (CG-47) AEGIS weapon system, and the successes achieved with the PHALANX Close-in Weapon System (CIWS) against two of the world's best known anti-ship missiles. Similar improvements have been made in the reliability and maintainability of our shipboard combat systems and propulsion plants. Increased integration of a variety of sensors and weapons has significantly reduced our weapon reaction time and improved our ability to put weapons on target in a timely and accurate manner. 1986 will see the fleet introduction of a number of combat capability improvements such as vertical launchers, new threat upgrade, and NTDS enhancements, which have been in development and are now ready.

In the sections that follow I will discuss additional surface programs that will increase our ability to attack enemy platforms at long range before they can launch their missiles, add depth to our defenses, and prevent repeated raids. I will also update you on the DDG-51 program; the Rolling Airframe Missile (RAM); and on other surface programs.

PROGRAM HIGHLIGHTS

AAAM/ASAM. Concept definitions with competitive industry participation has begun on Advanced Surface-to-Air and Air-to-Air Missile Systems (ASAM/AAAM) that will allow the most promising option or options to begin development next year. Although the requirements for these two systems indicate that a common weapon may not be optimal, we are striving to save money with the maximum commonality possible in the subsystems of these missiles. We will evaluate at least one option that will develop a single missile for both surface and air launched missions.

STANDARD MISSILE IMPROVEMENTS & NEW THREAT UPGRADES (NTU). The STANDARD Missile 2 Block II (Medium Range) entered production during the past year. This missile, fired by our TICONDEROGA class cruisers, provides a dramatic improvement in many areas over the older STANDARD Missile 2 Block I (Medium Range) missile it replaces. The employment of this Block II (Medium Range) missile, the Block II (Extended Range) missile on our TERRIER cruisers, and New Threat Upgrade installations that begin in 1986 on our TERRIER and TARTAR cruisers and destroyers will provide continuing AAW improvement to our battle groups.

The nuclear STANDARD missile, SM-2(N), could be a significant element of our Navy's defense-in-depth strategy and air defense capability for the 1990's. We have recently completed an extensive analysis of SM-2(N) employment strategy and have restructured the SM-2(N) program to focus in AEGIS ships. This restructuring is reflected in the FY 1986 budget submission, but also requires continued 1985 funding support. I solicit your early attention, to the Navy's reprogramming request for 1985.

Efforts continue to bring the Navy's Battle Group Anti-Air Warfare Coordination (BGAAWC) program to completion. When mature, this program will improve fleet AAW by providing better coordination of battle group sensors and weapon systems. One element of this system, the automatic grid-lock system, went into production last year.

DDG-51. Our efforts to build a modern surface fleet capable of conducting offensive operations continued with the, DDG-51 program. This is a highly survivable ship with impressive and flexible warfighting capabilities. Her cruise missile capability will add a new dimension to the Navy's surface warfare force.

The first unit of the Rankine Cycle Energy Recovery System (RACER) has been delivered to the Naval Ship Systems Engineering Station, Philadelphia, and the contractor has begun testing it. After thorough and satisfactory testing, we intend to forward fit RACER in the DDG-51 class combatants during construction. DDG-51 combatants too advanced in construction to permit forward fitting without major construction perturbation will be capable of being backfitted with RACER without major design modifications.

POINT DEFENSE. The Navy continues to improve its anti-ship missile system capability. Efforts are underway to accelerate introduction of the Block I version of the PHALANX system into the fleet. This will significantly enhance the ability of surface ships to defend themselves against anti-ship missiles. Flight testing of the Rolling Airframe Missile (RAM) prototype round continues.

This system, which is being developed in cooperation with Germany and Denmark, will provide the fleet with a high fire power defensive missile system that will complement the PHALANX system. Operational testing of RAM will begin in early 1985 with full operational evaluation beginning in September of this year. A well structured program has been initiated this year to exploit existing fuze and warhead technologies to defeat the projected improved threats of the late 1980's and 1990's. The near term effort will enable various shipboard surface-to-air missile systems to engage the current threat more successfully. In the long term, promising technologies will be developed to counter the anticipated threats of the late 1990's.

CG-47 UPGRADE. Development of the SPY-1B radar continues. This system will provide AEGIS ships with an improved capability to engage small radar cross-section targets in heavy jamming. Extensive developmental testing was conducted at the Combat System Engineering Development Site (CSEDS) in Moorestown, New Jersey. This testing validated the Navy's performance expectations for the SPY-1B. Operational testing of the SPY-1B will begin in March this year at CSEDS.

NAVAL GUNFIRE. We have recently initiated a study of the requirements and options for improving our gunfire support capability. The study report will be completed this March. We moved forward last year to improve the battleship's 16-inch gun system and ammunition effectiveness. We have completed several quick reaction improvements, determined other ammunition improvements that can be completed in the near term, and established a new project that will start in FY 1986 and will provide continuing improvements as the technology advances. As an example of a near term improvement, we are accelerating work on an improved new round, filled with modern Army submunitions that will be in the fleet in 1987. Our goal is to maximize lethality in the near term while developing the concepts and technology which will sustain battleship warfighting capability into the 1990's.

In FY 1986, we will begin full scale production of the semi-active laser guided projectile to be fired from modern, light-weight five-inch guns. Together with the associated laser fire control system, SEAFIRE, this projectile will enhance our capability to provide very accurate naval gunfire during amphibious assault operations and against enemy ships. The SEAFIRE system is now under contract for full-scale engineering development and will begin operational testing in FY 1987. We are presently reviewing plans to compete full production of SEAFIRE and anticipate first delivery of production systems to DDG-51 class ships in 1989.

ANTI-SHIP MISSILE DETECTION. In anticipation that the Soviets will make considerable progress in improving anti-ship missile performance, we have initiated several developments to counter that capability. A shipboard infrared search and target designation system, designated SAR-8, is now in full scale engineering development under a cooperative development agreement with Canada. This system will enable us to detect the infrared signatures of aircraft and missiles and rapidly designate these threats to shipboard weapons systems for engagement. In addition to its capability against new targets, the SAR-8 will improve our AAW capability in a jamming environment and will provide a passive surveillance capability while operating in a radar silent condition. We expect Initial Operational Capability toward the end of this decade.

Another system, which is intended to improve our capability against new targets, is the Advanced Tactical Radar System. This radar will integrate a weapon support subsystem with a surveillance subsystem to provide an affordable surveillance and and weapon engagement system for the next generation of small to mid-size combatants.

AIR PROGRAMS

OVERVIEW

Extraordinary attention and effort have been devoted to our RDT&E plans and acquisition programs because of the magnitude of the challenges confronting us, and because of the necessity of attaining our goals as efficiently and economically as possible. It is perhaps no overstatement to say that we have applied the new acquisition mangement policies more intensively, vigorously, and successfully in the Air R&D area than any other to date. As each major program has come up for review and milestone decisions, we have taken great pains to increase competition; to reduce acquisition costs and risks by tailoring and streamlining requirements and specifications; to promote commonality among aircraft and weapon systems; to press for more fixed price developments to prevent cost growth; to discipline proposed changes in these contracts; and to establish second production sources for weapon systems or subsystems.

In FY 1984 and FY 1985 a major thrust of the RDT&E air programs was to achieve commonality objectives which lead to cost avoidance. A-6F and F-14D projects are good examples of related accomplishments. The avionic improvements to both aircraft share over eighty percent subsystems and software commonality is also being pursued in the AV-8B and F/A-18 night attack programs thereby saving on acquisition and support costs.

With respect to aerial targets, last year the Navy very successfully qualified the interim supersonic low altitude target (VANDAL-Extended Range) at two launch sites (PMTC and Wallops Island). In addition, we successfully competed and awarded a fixed price R&D contract, which includes firm fixed price production options, for the future supersonic low altitude target (AQM-127A). This target will be available in FY 1990 for R&D testing.

We continue to reap the benefits of our efforts to streamline system requirements in missile and aircraft systems. These actions are best seen by the record the Secretary of the Navy has established in the continued decrease in the fly away unit costs of our tactical aircraft and missile system during the last four years.

Having previously described some of our recent accomplishments in this area, I would now like to say a few more words about our FY 1986 proposed F-14, V-22 Osprey (JVX), A-6 and ATA aircraft developments; unmanned air vehicles; the T-45 Training Systems; our missile programs; Aerial targets; and NACES.

PROGRAM HIGHLIGHTS

F-14 UPGRADE. We have a firm fixed price contract for the F-14 upgrade, which will include new engines, radar improvements, infrared search and track, and avionics architecture changes, which insure commonality of operations and support with fleet aircraft and ships employing JTIDS, ASPJ, ALR-67, and AMRAAM. This upgrade will increase the F-14's performance against the projected threat into the twenty-first century.

V-22A(JVX). As previously mentioned, we are proceeding into FSD with the V-22A OSPREY. This program exploits a true technological breakthrough in aircraft design. The V-22A will combine the hover capabilities of a conventional helicopter with a turbo prop's speed, range and payload. The aircraft will not only be capable of vertical take-off and landing but will have a 250 knot cruise speed and global self-deployable range. Our V-22A program will deliver over 900 of these tilt-rotor transports to the Services, meeting Marine Corps assault, Air Force special operations, Navy combat SAR and Army combat support mission requirements.

A-6E IMPROVEMENTS. The present A-6E aircraft are not adequate to meet the Navy's all-weather requirements in the 1990's. We need to improve their survivability, reliability and maintainability for sustained warfighting capability, while reducing their life cycle cost. We also must address inventory shortfalls.

We have an A-6 improvement program in full-scale development under a fixed price RDT&E contract, which addresses these needs. This contract is being executed in conjunction with a similar contract for the F-14D development on a program cost sharing basis. The A-6F will have improved thrust engines, common to the F/A-18, digital avionics with maximum commonality to the F/A-18, F-14D and AV-8B, and a new high resolution radar for standoff targeting.

The program includes integration of various air-to-surface standoff weapons, defensive electronics countermeasures, Halon inert fuel system in the event of fire or battle damage, improved radios for increased reliability and maintainability, and the secure HAVE QUICK capability.

With regard to A-6 inventory shortfalls, we plan for A-6F procurement in FY 1988-93, with first delivery commencing in 1990. To meet the requirements for improved survivability and enhanced reliability and maintainability in the 1990's, a number of A-6F's built prior to FY 1988 will require modification to the full A-6F configuration and we are now in the process of specifying and costing this effort.

ADVANCED TACTICAL AIRCRAFT (ATA). We are planning to replace the A-6 in the late 1990's. The replacement aircraft, designated the Advanced Tactical Aircraft, will also contribute to fleet air defense and electronic warfare operations, greatly increasing our warfighting flexibility. Emphasis will be placed on high payoff technology and specific ATA concept studies by major aerospace firms. We are staffing a Memorandum of Understanding with the Air Force to ensure maximum commonality with the Air Force's Advanced Tactical Fighter and to share the burden of developing advanced integrated avionics and weapons systems.

UNMANNED AIR VEHICLES: We have significantly increased activity in the areas of Remotely Controlled Vehicles (RCV's) and decoys. We initiated rapid action to develop competitively RCV's that meet USN and USMC operational requirements for various missions. The Navy will take the lead in DoD for development of low cost RPVs for reconnaissance and targeting. In addition we intend to procure competitively additional decoys as quickly as possible.

T45TS. We are in the final stages of contract definitization for full scale engineering development of our T-45 Training System. This contract calls for the development of a integrated undergraduate jet flight training system consisting of the T-45 aircraft, flight simulator, academic courseware, computer aided instruction, and a training integration system.

HARM/LOW COST SEEKER/ARM PROGRAMS. The HARM weapon system is in its third year of production, second year of fleet use with the A-7 aircraft, and first year introduction on the F/A-18. The fleet is impressed with its performance, reliability, and maintainability. We are integrating HARM capability in the A-6, along with other standoff weapons. Due to the excellent efforts of the Naval Material Command and commitment by Texas Instruments, the total HARM program cost projection is now 30% lower than our projections of two years ago. We are aggressively developing a reduced cost seeker for HARM to continue to gain benefits of competition and increase the Anti-Radiation Missile industrial base. This seeker will also have application in other weapons.

In concert with other services, we have prepared a comprehensive Anti-Radiation Missile "Roadmap" to chart our course for future ARM requirements, and to ensure joint programs where there are sufficient common requirements and cost effective solutions.

AERIAL TARGETS. The development of high performance targets for our test program continues at an accelerated pace to provide the most complete weapon systems testing possible. The VANDAL (ER) program, a supersonic sea-skimmer, is now operational on both coasts and came in on time and on cost. The contract for the BQM-126A, low cost follow-on to the BQM-34, was competitively awarded in September 1984. The Supersonic Low Altitude Target (YBQM-127A) contract was also awarded in September 1984.

NACES (NAVY AIRCREW COMMON EJECTION SEAT). The ejection seat is the primary means of aircrew escape from disabled aircraft. Current tactical aircraft ejection seats are procured sole source on an annual basis with each type aircraft having a different model ejection seat. In FY 1984 we initiated a program to acquire a common seat that is procured competitively on an annual basis. Commonality will provide benefits in safety, training and maintenance costs and lower cost due to competition. In addition, there will be greater competition in the area of spares and consumable parts for this system. Our program to develop a Navy Aircrew Common Ejection Seat (NACES) for use in the F/A-18, TF-18, T-45, F-14D and improved A-6E aircraft is progressing well since its start in FY 1984. We are evaluating several responses to our Request for Proposals on a single seat design. We will use a leader follower concept to co-produce the Navy Aircrew Common Ejection Seat and further reduce its cost.

ASW PROGRAMS

OVERVIEW

For the past 20 years our ASW investment strategy and operational tactics have been structured to maintain and exploit the acoustic advantage we enjoyed over Soviet submarines. Our surveillance systems, sonar systems, sonobuoys, towed arrays, submarine silencing, ASW weapons, operational tactics, indeed the entire spectrum of ASW efforts have been based on our acoustic advantage. Basically, we took advantage of the fact that Soviet submarines were generally easy to detect. As the Soviets reduced the radiated noise from their submarines we made the necessary technical improvements to maintain our advantage.

In our efforts to maintain an acoustical advantage, we have been fortunate that in the past we were able to predict rather accurately what their radiated noise levels would be and adjust our ASW efforts accordingly.

In the last year it has become obvious that the Soviets have improved the quieting of their newer submarine classes, and this Soviet noise reduction is a significant development which confronts us in ASW.

First, it requires that we silence, to the fullest extent possible, our ASW ships and submarines, especially SSN 21.

Second, we must complement our acoustic silencing efforts with development of new surveillance systems, sensors, and tactics. We will face a mixture of old and new Soviet submarines through the year 2000. Therefore we need to maintain a full range of proven acoustical capabilities against the current threat while developing effective counters to the projected quieter threat. The solution to the future threat is many faceted and requires initiatives in many areas.

Third, we must be prepared to provide increased close-in ASW defense for our surface forces and battlegroups while maintaining full strength outer zone defenses. As Soviet submarines become quieter, they will place increased pressure on our inner zone defenses. The CV inner-zone and LAMPS MK III helicopters, quick reaction vertical launch ASROC, and the Surface Ship Torpedo Defense System form the nucleus of our increasingly important inner zone ASW defense.

Finally, we must ensure that our torpedoes are fully capable against the emerging threat. In the final outcome, the success of our billions of dollars worth of ASW platforms and systems will be determined by the effectiveness of our torpedoes. The MK-50 Advanced Lighweight Torpedo and the MK-48 ADCAP must be lethal, quiet, fast, smart, deep-diving, and capable of being employed quickly and simply.

In summary, the change in the Soviet submarine threat is the major influence on the ASW investment strategy presented in the following sections.

PROGRAM HIGHLIGHTS

ENVIRONMENTAL RESEARCH AND SURVEILLANCE. Environmental acoustic research and development programs are focusing on accurately modeling and predicting active and passive sonar system performance. This will provide tactical units the acoustic information needed to determine optimum detection and counter-detection envelopes. In the Arctic, where the Navy has the responsibility for coordinating all acoustic efforts, we are collecting and evaluating environmental acoustic data in order to better understand the Arctic undersea environment. We will also be conducting the first sustained Arctic ASW exercise this year.

In ASW surveillance, we are currently completing the SOSUS backfit program. Modernized Fixed Distributed Systems will exploit technological advances and improved data transmission. These new systems will complete development and enter the fleet well before the year 2000. Other even more advanced developments are being researched to augment existing fixed arrays and the Surveillance Towed Array Sensor System (SURTASS) to meet the requirements of the twenty-first century. We are also continuing research in shallow water ASW acoustics and exploring the use of the physical geologic properties of the seabed for potential ASW applications.

SURFACE ASW WEAPONS AND TORPEDO DEFENSE. Surface ship ASW improvements includes hull-mounted sonar upgrades that will begin to enter the fleet with the installation of our first production AN/SQS-53B. This system is scheduled for installation on all DD-963, CG-47 and DDG-51 class combatants. The follow-on SQS-53C Sonar will be installed in new production DDG-51's when the sonar completes development. These sonar improvements, in conjuction with other SQQ-89 ASW system components like the MK-19 Tactical Towed Array Sonar (TACTAS) and the LAMPS III helicopter, will substantially improve the detection and prosecution capabilities of our surface ASW forces.

Surface ASW weapons improvements include the MK-50 Advanced Lightweight Torpedo and a P3I program to address future warhead requirements. The Vertical Launch ASROC program, which will replace our aging ASROC box launchers and increase the range of the weapon, has completed advanced development and will be entering engineering development this year. We are well into a two year program to establish future mine and mine delivery system requirements and to assess available foreign and domestic technologies for mine warfare applications. This program will lead to an operational and technical baseline for initiating mine warfare developments in the future.

We have also increased emphasis on protecting our combatant, logistics, and amphibious force ships from submarine launched torpedo attack. The Surface Ship Torpedo Defense program will provide torpedo defense for our high value aircraft carriers and other ships.

AIR ASW PROGRAMS. We are making significant strides in upgrading our Airborne ASW capability. The latest version of our long range patrol aircraft, the P-3 update III, is now entering the fleet with improved acoustic receivers, processing and displays. The P-3 update IV is entering development. It will incorporate the UYS-2 Enhanced Modular Signal Processor, which will be able to process the outputs from large numbers of advanced sensors. The P-3 update IV will also include an upgraded non-acoustic sensor suite, and a data bus architecture to facilitate data management and future growth.

A weapon system improvement program for the S-3B, our fixed wing carrier based ASW aircraft, is undergoing initial operational evaluation, with production approval scheduled to occur this year. The S-3B incorporates improved signal processing, enhanced ESM/ECM systems, an Inverse Synthetic Aperture Radar and Harpoon capability.

We have deployed our first three LAMPS III helicopter systems which, in concert with its host ship and the SQR-19 tactical towed array, provides a significant improvement to carrier battle group mid-zone ASW defenses. We recently awarded a development contract for a new inner zone CV helicopter, a variant of the LAMPS III SH-60 airframe, which will incorporate an improved dipping sonar, the AQS-13F, be able to sustain dipping sonar operations for longer periods and have greater endurance than our current CV helicopter, the SH-3H.

To complement our airborne ASW platform improvements, we are initiating efforts to procure a new set of acoustic sensors designed to detect new Soviet submarines. The Low Cost Sonobuoy (LCS) program will provide air ASW forces with a sensor which can be produced in sufficient quantities to be effective in detecting new generation Soviet Submarines. It will be manufactured using robotic technology and high rate production procedures. We are looking at the manufacturing methods of other sonobuoys to obtain lower costs.

Additionally, the Horizontal Line Array and Sonobuoy Thinned Random Array Processing programs are being developed as high gain sensors. The Tactical Surveillance Sonobuoy will also provide an increase in the area an aircraft can cover compared to current sonobuoys. Active adjunct techniques, which require the development of acoustic transmitters to complement our passive acoustic sensor systems, and the Expendable Reliable Acoustic Path Sonobuoy will provide significant improvements in active contact prosecution.

ATTACK SUBMARINE PROGRAMS. In our Advanced Submarine Technology Program we are developing systems and concepts for future attack submarine classes. As required by the FY 1985 budget authorization, our R&D program has approximately $30M available to advance the state of submarine technology, which can be exploited by the SSN-21 well into the next century. The R&D program also includes a vigorous program to ensure that a follow-on to the new design attack submarine can be implemented as the threat dictates.

The key attributes of our future submarines can be defined in terms of their combat control and weapons, quieting, sensors, firepower, speed, depth, survivability, and affordability. Major thrusts in the technology base for combat control and weapons include advances in combat information management, development of concepts for quieter, faster, and more potent torpedoes, and development of concepts for Arctic warfare. In the area of quieting, we are concentrating on reducing the noise generated by ducted propulsors, machinery, and weapon launching systems. Reductions in the weight and volume of hull, mechanical and electrical systems will allow our submarines to carry more weapons.

We are actively pursuing a number of technologies with direct application to the ASW surveillance capability of future submarines. The Advanced Conformal Submarine Acoustic Sensor (ACSAS) System for future SSN classes is one such technology. The fiber optic sensor is another. We continue our emphasis on automated, acoustic data processing and other developments to take advantage of our superiority in computation and signal processing.

Special improvements and programs are in force to attain higher speeds in the near term. These programs were accelerated and will produce materials for full scale evaluation soon. We are also evaluating innovative control surface configurations to increase the safe operating envelope for future submarines, allow higher speed operation, and improved operation in shallow water.

Greater operating depth for future submarines requires new structural materials and machinery components. HY-130 high strength steel has transitioned from the technology base and is available for certification experiments. We are making substantial progress in developing deep submergence machinery systems.

There are a number of promising programs that will pay off in the design of future submarines. Internal and external coating developments will lead to new hull coatings to reduce radiated noise. We are also focusing on other promising material developments such as advanced welding technology, ceramics, composites, and improved steels. A major effort on hull/propulsor interaction will provide the understanding needed to produce a propulsion configuration with minimum noise and maximum propulsive efficiency. Fundamental research in physical oceano-graphy, solid mechanics and hydroacoustics will benefit submarines and other naval platforms.

NEW DESIGN SSN. The SSN 21 is being developed to counter the rapidly increasing capabilities of the Soviet submarine force. It will be capable of rapidly deploying to forward ocean areas to search out and destroy enemy submarines, surface ships and land targets. The Navy attack submarine R&D program will give the highest priority to technology that can be introduced in a new submarine design targeted for an authorization date of 1989 for the lead ship.

The SSN 21 will have several significant improvements over the SSN-688.

The Preliminary Design Phase is essentially complete, and we expect to proceed to Contract Design in mid-1985.

SUBACS. The Submarine Advanced Combat System (SUBACS) is a three phase development and deployment program initially providing a distributed processing architecture that will simplify introduction of follow-on improvements. Its fundamental objective is optimizing our tactical advantages against future generation Soviet submarines which is necessary to combat their greater numbers and technological improvements. This involves regaining capabilities previously reduced by Soviet advances and exploiting new concepts in detection and tactical battle management. The three phase approach best meets this objective while minimizing development risk, promoting earliest introduction of new capabilities, and providing SUBACS capability to the 1983 thru 1988 authorized 688 class SSN's (21 Ships). The SUBACS basic system will contain the integrated acoustic detection system with digital data bus, distributed processing architecture, UYK-44 computers and new weapons launch, navigation, and communcations systems. The follow-on phases of SUBACS will provide advanced sonor arrays and the integrated combat control system containing large scale functional software improvements, operability enhancements, EMSP processors, new system control consules and the integrated SFA NYMPH ESM system.

MK 48 ADCAP. Testing to date has shown the MK 48 ADCAP will have improve effectiveness through improvements in its homing system along with increased speed and greater depth capabilities. A decision to proceed to limited rate production is expected in the middle of this year.

SIGNAL PROCESSING. We continue to make major advancements in our signal processing capabilities. The Enhanced Modular Signal Processor, the UYS-2, is currently being developed to meet our growing signal processing needs well into the next century. Depending on configuration and application, it provides anywhere from 1.4 to 15 times and, if needed, can be configured to provide up to 25 times, the processing power of our current standard signal processor, the UYS-1. Its modular system architecture will facilitate the incremental introduction of future advancements in hardware and software technology and plan to complete development of a VHSIC floating point arithmetic processor in time to be incorporated in the FY 1988 Advanced Production Equipment deliveries. The UYS-2 will be used in a wide range of air, surface, subsurface and shorebased processing applications with early 1990's fleet introduction in such systems as: the P-3 Martime Patrol Aircraft, Surveillance Towed Array Sensor System (SURTASS), Submarine Advanced Combat System (SUBACS), Fixed Distributed Systems (FDS), and the Relocatable Over-the-Horizon Radar (ROTHR).

The Navy continues to study other means of detecting enemy submarines. In 1984 the Office of Naval Research sponsored two extensive experimental programs aimed at improving our basic physical understanding of sensing of the ocean to detect submarine effects. Several eminent scientific research institutions participated in this effort and data analysis will continue into 1985. Information obtained will be useful in anti-submarine warfare, and future efforts to eliminate from our submarines those characteristics that might have potential for non-acoustic exploitation.

The Navy will continue research into a broad range of other ASW sensors, and various phenomena will be explored. The understanding of these phenomena and their detection lies in the forefront of science and technology. Efforts involve programs of higher classification.

The Navy fully supports the Congressionally authorized CIA ASW study to determine what the Soviet program is and to ensure we understand the basic phenomena that they are exploring. We strongly endorse the study's purpose and are working closely with the CIA to ensure the most thorough study possible.

MINE COUNTERMEASURES. We are continuing to make excellent progress in developing mine countermeasure systems. In FY 1985 we will begin deliveries of the first Mine Neutralization System for our MCM and MSH ships. Our AN/SSN-2 Precise Integrated Navigation System will also be undergoing TECHEVAL and OPEVAL in FY 1985. The AN/SQQ-32 Advanced Mine Hunting Sonar System is continuous development and will eventually be installed in all MCM/MSH ships. For airborne mine countermeasure applications, the A/N 374-1 Controlled Depth Moored Sweep and the AN/ALQ-166 wide coverage Magnetic Sweep systems are both undergoing OPEVAL this year. The AN/AQS-17 Sonar and its associated mine neutralization device will begin TECHEVAL in FY 1986.

COMMAND, CONTROL, AND COMMUNICATIONS

OVERVIEW

We will continue to support developments that will increase our ability to communicate more reliably, securely and effectively with and among ships, submarines, aircraft, satellities, shore facilities, and command centers; with Marines ashore; with units of the other Services; and with allied forces. If the whole is to be greater than the sum of its parts, we must be able to exchange data and commands quickly, often times in a heavy jamming environment. We must also be able to condense, fuse, and evaluate enormous quantities of information efficiently; minimize the enemy's access to this information; reduce his ability to mislead us; and display evaluated facts to commanders so they can plan and control large scale combined land, sea, and air operations.

During 1986, we will continue to refine and improve the C^3 Systems Architecture which is the master plan and logical basis for linking intelligence systems, wide area surveillance systems, combat forces, and force commanders together. It also provides the framework for prioritizing and scheduling related C^3 developments; for coordinating hardware and software programs; and for defining the principal interfaces within the system as a whole.

Shore command and control centers that are, or will in the future, be upgraded and integrated include the Ocean Surveillance Information System (OSIS), the Anti-Submarine Warfare Operations Center (ASWOC), Shore ASW Command Centers (SACC), and the Submarine Operations Command Center (SOCC). The OSIS Baseline Upgrade (OBU), now in full scale development, will improve the timeliness and quality of ocean surveillance reports sent to the fleet. It will also be able to handle more surveillance data, including data from the

Relocatable Over-the-Horizon Radar (ROTHR) and other systems. The OSIS Baseline Upgrade design will provide a common hardware/software architecture for upgrading other shore based C^2 systems. The ASWOC will be the next system upgraded; full scale engineering development of this upgrade is scheduled to begin in FY 1986.

In a similar fashion, we are proceeding with development and integration of our afloat command and control capability. The Advanced Combat Direction System currently under development is being closely integrated with existing and future C^2 afloat systems to minimize software and hardware developments.

Wide Area Surveillance. Battle group commanders need to know the location, identity, and movements of enemy, friendly, neutral, and U.S. forces within their operating areas. Studies, operational experience, and intelligence indicate that afloat commanders should be provided with surveillance information out to extended ranges. Our sensors, data processing systems, and communication links need to provide continuous, reliable, timely surveillance information on aircraft, surface ships, or submarines at such ranges. Furthermore, the detection ranges of sensors may decrease if enemy forces engage in intensive Electronic Warfare. Consequently, we are working hard to develop new sensor systems, on-board processing capabilities, and required communication links.

ROTHR. One such sensor development that deserves special mention is the Relocatable Over-the-Horizon Radar (ROTHR). This program is progressing well and will enable us to detect ships and aircraft over large areas of the globe. When the ROTHR becomes operational we should be able to move it rapidly from one site to another in response to changing situations and threats.

Tactical Communications. Tactical communication systems must have resistance to jamming. The JTIDS and TADIL J developments will provide high capability, anti-jam systems that will allow platforms to communicate within line-of-sight. The HFAJ program will extend communications beyond line-of-sight ranges to long distances. Extremely High Frequency Satellite Communications (EHF SATCOM) will provide a jam resistant alternative to Ultra-High Frequency (UHF) SATCOM, first with the Fleet SATCOM EHF package (FEP), and later with the joint MILSTAR satellite. All new communication systems emphasize joint service and NATO interoperability, Communication Security (COMSEC), and resistance to enemy jamming or exploitation.

JTIDS: Our prime effort in achieving this essential communication capability is the JTIDS program. This system represents a significant advance in capability packaged in a small volume and, as a result, has presented some severe challenges. Some of you may be aware that the Chief of Naval Material has announced that there will be a nine month slip in the planned IOC as a result of a projected delay in the delivery of the JTIDS terminals from Hughes Aircraft company. However, the problems are now schedule not technical feasibility and the system is going through integration testing. An engineering development model will be available in less than a year. The contract will remain in force and the government has a capped liability at $147M.

We need the AJ features with the multiple netting capability that JTIDS will provide. Simultaneous multiple AJ C^3 nets are essential to fight our carrier battle groups under the Composite Warfare Battle doctrine, and in face of the growing multi-dimensioned Soviet threat at sea. We are determined to hold the line on costs and to get Navy JTIDS into the fleet.

HFAJ. The High Frequency Anti-Jam (HFAJ) program will develop a new family of broadband frequency hopped high frequency communication equipment for all platforms. Hardware specifications will emphasize commonality of components across all platforms and the acquisition strategy will assure competition in both development and production. Modern waveform and network designs will increase the reliability of communication links through the variable HF medium, and reduce vulnerability to exploitation and jamming. In addition to providing a unique capability to communicate at extended line-of-sight ranges without a relay platform, HF will serve as the ultimate backup for strategic and tactical communications.

ELECTRONIC WARFARE

OVERVIEW

We are developing Electronic Warfare (EW) systems that will allow the Navy to conduct both defensive and offensive electronic warfare over a large part of the electromagnetic spectrum. The ability to use our own sensors, data links, and weapons effectively while denying the enemy the use of similar systems will, to the extent we are successful, be a key factor in multiplying the effectiveness of U.S. forces. Effective EW can result in the advantages of surprise; the realization of the full potential of a battle force; and can reduce U.S. losses. We are, therefore, supporting four broad categories of EW developments: (1) new systems for managing and coordinating the use of EW assets at various levels of command, including jam resistant communication links; (2) sensors and EW receivers; (3) jammers, decoys, new chaff systems, and other EW counter measures; and (4) EW simulators, trainers, and T&E facilities.

PROGRAM HIGHLIGHTS

The Electronic Warfare Coordinator's Module (EWCM) will enable a Battle Force Commander to manage his own and other EW assets. He will be able to plan, conduct and execute EW, monitor its effectiveness, and rapidly implement necessary decisions. The Electronic Warfare Control System (EWCS) will perform the actual EW integration function at the platform level, enhancing the CO's ability to conduct warfare operations. We will continue to support a joint program with the Air Force to develop a fully integrated airborne EW suite. This Integrated Electronic Warfare System (INEWS) will provide full spectrum EW capability optimally integrated into tactical aircraft.

With respect to EW receivers and countermeasures, a number of improvements are being introduced in the surface ship anti-shipping missile defense EW suit, the SLQ-32 systems. These include increased sensitivity, threat response upgrades, low band direction finding accuracy improvements, and software changes. Most of these improvements will be made by tiger teams using field change kits. This year several new improvements will be tested. For aircraft carriers, similar improvements will be incorporated in the SLQ-17 system. In addition, the Advanced EW System is scheduled to begin FSED this year, and improvements to the WLR-1H EW receiver will also be tested.

The first production model of the Increased Capability II revision of our EA-6B support ECM aircraft was delivered early last year and has passed Follow-on Operational Test and Evaluation with flying colors. We will be integrating the ALQ-149 system into the EA-6B ICAP-II to provide the fleet with organic communications jamming. Previous plans called for initial integration into the EA-6B ADVCAP which is now under devlopment. This ICAP II approach will accelerate ALQ-149 fleet introduction.

The Active Electronic Buoy is being developed to enhance defense for U. S. ships; the Chaff Buoy, a passive device, is nearing completion of development; AIRBOC is an air deployed cartridge that generates a chaff cloud and has also nearly completed development. Successful advanced development tests have been conducted on the Ship Launched Electronic Decoy (SLED) and the Counter ARM Decoy (CAD). Both projects are coming up for FSED decisions this year. A joint SLED FSED effort with Australia is being explored at this time.

ASPJ. The Airborne Self Protection Jammer (ASPJ), a Navy lead joint program with the Air Force, will provide the defensive electronic countermeasures suite for the Navy's first line tactical aircraft. The program has experienced schedule slippage and cost growth due mainly to technical and vendor related difficulties; however, a contract cost cap has been negotiated and is in place. Due to the schedule slips, start of initial production will be in FY 1986 vice FY 1985. We estimate the contractors full scale engineering effort to be 85% complete and the ASPJ prototype No. 6 (of 12) has just been delivered. It will undergo environmental and electromagnetic interference testing as other prototype units are undergoing performance testing at Point Mugu and integration into the F-16 and F/A-18. Flight tests will begin in May and June 1985 for the F-16 and F/A-18, respectively, with developmental and operational evaluation testing to be conducted in FY 1986.

In the area of Electro-Optical countermeasures, the Navy has been supporting the Air Force by conducting field tests with Compass Hammer to obtain technical performance data. We are also conducting engineering tests of Generic

Expendable or GEN-X, a follow-on to POET. Improved flare designs will be tested this year.

We have several initiatives to provide more realistic operational test and evaluations of EW components and systems. The CROSSBOW-S generic radar was delivered last year and was initially installed at Eglin Air Force Base under a Memorandum of Agreement with the Air Force. This software reprogrammable radar simulates many different threat radars. When planned modifications are completed next year, it will enable us to simulate the most modern naval threat systems and will be the cornerstone of the Navy's EW simulation modernization program.

As desired by Congress and the GAO, oversight of Navy OT&E EW simulators is being conducted by a single flag officer, the Director, RDT&E. Additionally, through the Joint Executive Committee on Air Defense Threat Simulators (EXCOM), all Services' simulator development efforts are being coordinated to eliminate redundancy and ensure commonality.

MARINE CORPS PROGRAMS

OVERVIEW

We continue to give strong emphasis to improvements in the capability of our Marines to meet the challenge of amphibious warfare around the globe. The Corps must have capable, cost effective, and logistically supportable equipment. The Marines participate in joint developments with other Services to satisfy common requirements whenever possible. Unilateral developments are undertaken only in cases where unique Marine Corps requirements exist or significant savings can be achieved. The Corps emphasizes low-risk, state-of-the-art technology, service life extension programs, and preplanned product improvements. Systems are required that are readily transportable or mobile, flexible, and affordable, whether they are intended to deliver troops and weaponry ashore, maneuver them on the battlefield or provide the vital command and control links that make effective combined arms employment possible.

PROGRAM HIGHLIGHTS

MV-22A (JVX). I have discussed this program, but emphasize here only that it is of particular importance to the Marine Corps. The MV-22A will give the Marine Corps unparalleled operational flexibility by providing a means to deliver two assault waves ashore from 50NM without refueling or to transport 24 combat troops to an objective 200 miles away. An IOC of 1991 is necessary to replace aging helicopters.

LAV. The highly successful Light Armored Vehicle (LAV) program will satisfy the Marine's requirement to increase tactical mobility while improving firepower. The six mission role vehicles already approved for procurement will give the maneuver elements the means to counter the armored mobility of adversaries. The development of the assault gun and air defense variants are being continued to round-out this versatile family of fighting vehicles.

The Assault Gun (LAV-AG) mission role vehicle will add a rapid, direct fire capability that can be lifted by helicopters. We have not yet determined the armament for the LAV-AG, but an automatic cannon or a missile, such as a modified TOW or a hypervelocity missile (HVM), are among the alternatives being considered.

The Air Defense (LAV-AD) variant should enter FSED early this summer. The present configuration employs a GAU-12 25mm Gatling gun with Stinger missiles. Target acquisition will be provided by a forward looking infrared (FLIR) and a laser range finder.

Assault Amphibians. The Marine Corps has a requirement for an advanced amphibious assault vehicle to replace the LVT7A1 in the late 1990s. The goal is to achieve a design that will significantly improve survivability in addition to achieving faster speeds in the water and increased agility in the water and ashore. In conjunction with this effort we are moving ahead with development of the rotary engine and light weight armor concepts.

RPVs. The Marine Corps has a new requirement to obtain near-real-time battlefield reconnaissance, surveillance, and target acquisition information without risking expensive manned aircraft. A Remotely Piloted Vehicle (RPV) development program has been initiated to select a system with a video sensor and radio relay equipment to meet a FY 1988/1989 initial operational capability

(IOC). The system configuration will be decided after testing promising off-the-shelf components.

A related capability, the All Source Imagery Processor (ASIP), is being developed to meet the Marines' requirement for near-real-time sensor data. It will be designed to receive, process, and exploit imagery from organic, theater, and national sources. It will also generate tactical intelligence reports derived from the exploitation of that imagery.

Armor. Since the M60A1 Tank is reaching the end of its service life, we need to upgrade or replace it. The preferred alternative is the M1A1 Abrams Main Battle Tank. We have been monitoring the Army's tests and the Marines have recently completed their own unique operational testing in an amphibious environment. The results of the testing have proved acceptable, and we are moving towards a procurement decision.

Firepower. The Shoulder-Launched Multipurpose Assault Weapon (SMAW) gives the Marine Corps a unique bunker-busting capability as well as a means of breaching walls in urban areas. The SMAW was fielded in November 1984, and an anti-armor round is being developed for introduction in 1987. Development of an improved warhead for the Dragon Medium Antiarmor Weapon will begin this year. The Dragon sight will also be improved to enhance its accuracy and resistance to countermeasures. This will give the Marines interim anti-armor capability while the Army completes development of its Advanced Antitank Weapon System (medium). In conjunction with the Army, the Marines are replacing the 81mm mortar with the improved 81mm made by the Royal Ordnance Factories in Great Britain. We have also evaluated a lightweight 120mm motor. The increased range, accuracy, and lethality of this weapon are impressive. We are closely monitoring Army deliberations concerning the possible acquisition of this weapon.

The Corps' artillery is being modernized with the selection of the Army's Battery Computer System to increase the accuracy of supporting fires and to speed the response to supported units. This system will be interfaced with the Digital Communication Terminals now in production to provide a secure communications link to supported forces.

Command, Control and Communications. The Tactical Air Operations Central, 1985 (TAOC-85) is our program to replace the aging Marine Air Command and Control System now in use. TAOC-85 will provide flexibility and allow tailoring of the size of the system proportionally to the unit supported. Fewer Marines will be required to operate this system, and it will incorporate current computer technology and communications equipment. It will also have the mobility and flexibility of helicopter transportability.

The Marine Integrated Fire and Air Support System (MIFASS) is another vital tactical command and control system scheduled for initial operational testing this year. MIFASS will provide the tactical commander an automated capability to coordinate the employment of all supporting arms including mortars, artillery, naval gunfire, and close air support. MIFASS will fully integrate all the individual fire support systems on the battlefield of the future.

In the area of tactical communications, we are operationally testing the Unit Level Circuit Switch (ULCS) on a Joint Command, Control, and Communications Agency test bed to verity that improvements made by the contractor have corrected discrepancies found during tests last year. We will decide whether to procure the system in April of this year based on the test results.

INTERNATIONAL R&D COOPERATION

International R&D Cooperation. We are involved in the efforts of the Department of Defense to cooperate with NATO allies and other free world countries to standardize or make interoperable equipment and weapons systems. Navy participates in R&D programs supporting common NATO requirements, evaluates foreign weapon systems, and co-developes and/or co-produces selected weapon systems and equipments. Navy also supports international industry-to-industry cooperation. Examples of programs that satisfy common requirements of NATO nations are, Infrared Search and Track (IRST), (US/CANADA), and Link 11 Improvements (NATO). Foreign systems being evaluated for possible procurement include PENGUIN Missile Guidance Unit (Norway), Missile Launch Detection System (France), Integrated Communication System III (UK) and Versatile Exercise Mine System (UK). Co-development and/or co-production programs include Rolling

Airframe Missile (RAM) with Denmark and Germany, NATO SEASPARROW Point Defense Missile System, NATO SEA GNAT and NATO Frigate Replacement for the 1990s (NFR-90). In addition to our participation in cooperative R&D with NATO, we are actively looking to the initiation of programs with other free world countries, most notably Japan and Australia.

In late January at the invitation of the Chinese Government, I led a U.S. delegation to China to continue work on the initiatives begun by the Secretary of the Navy during his visit to the PRC in August 84. In addition to discussions with senior military leaders and other technical and civilian military experts, our visit included inspection of PRC factories, design institutions, shipyards, air and naval bases and ships and aircraft of the PLA-Navy. Before returning to the U.S., we exchanged minutes documenting the progress to date in the Navy-to-Navy Cooperative Program.

CONCLUSION

As I have pointed out in my report to you, we are committed to a vigorous program that strives for excellence. Our planning and management is straight forward and we have proved that we can reduce the costs of many acquisitions. I believe we have a consistent, balanced, coherent and responsible plan and program that supports the Navy's overall maritime strategy. Our programs are matched to the threat we face now and well into the future. The programs that the Congress has supported over the past four years are paying great dividends to our nation. I am confident that our constructive relationship will maintain this momentum. Thank you. I am ready to try to answer your questions.

MELVYN R. PAISLEY

BIOGRAPHY

Mr. Melvyn R. Paisley was nominated as the Assistant Secretary of the Navy (Research, Engineering, and Systems) by the President on October 27, 1981, approved by the Senate on November 23, 1981, and took the oath of office on December 2, 1981.

A native of Portland, Oregon, Mr. Paisley graduated from the American Institute of Technology in 1953 and completed his graduate work at MIT in 1954. As a fighter pilot with the 9th Air Force during World War II, he is credited with shooting down nine enemy aircraft, and was awarded the Distinguished Service Cross, the Silver Star with one Cluster, the Distinguished Flying Cross, and 16 Air Medals.

Mr. Paisley comes to the Department of the Navy after 28 years of military business experience with The Boeing Company. At Boeing, Mr. Paisley was involved in all phases of airplane, missile, and electronic development.

Prior to Mr. Paisley's retirement from Boeing in 1981, he was Vice President of Boeing International Corporation and International Plans and Operations Manager for Boeing Aerospace Company. He structured Boeing Aerospace Company's first international military sales organization and was responsible for what is now the NATO AWACS (E-3A) Program.

On Special assignment to the Defense Science Board in 1978, Mr. Paisley led the industry team which was instrumental in developing the Memoranda of Understanding for the family of weapons concept in that year. His appointment to this assignment was based on his understanding of NATO military requirements, and his established relationship with the NATO military community, industrialists, and Parliamentarians.

In his present capacity, Mr. Paisley is responsible for all matters related to research, development, engineering, test and evaluation within the Department of Navy, as well as for technology transfer, oceanography and ocean engineering. His responsibilities include the management of the appropriation "Research, Development, Test and Evaluation, Navy," giving him far more control over the Navy's R&D programs than normally exercised by officials at the Secretarial level. As the Navy Acquisition Executive (NAE), Mr. Paisley is the principal advisor to the Secretary of the Navy for development of Navy systems and equipment.

Mr. Paisley is married to the former Vicki McKim. He has four children.

STATEMENT OF VICE ADM. EDWARD H. MARTIN

NAVY BUDGET REQUIREMENTS

Admiral MARTIN. Good morning, Mr. Chairman and distinguished members of the committee.

I welcome this opportunity to appear before you and discuss some of our requirements in the fiscal year 1986 aviation procurement, Navy APN account.

Mr. Chairman, in addition to being prepared and fully capable to defend our national interest in time of global conflict, this Nation continues to call upon the Navy to be able to respond to numerous crisis and contingencies throughout the world.

Less than 3 months ago I was Commander of the U.S. Sixth Fleet, and during the 2½ years that I was in the Mediterranean area there were few periods when we were not involved in responding to a crisis or preparing for some type of contingency.

EMPHASIS ON PILOTS, AIRCRAFT, AND SHIPS

We are stressing our pilots, our aircraft and our ships with an op tempo which is 15 to 20 percent higher than it was during the Vietnam period. It is essential that we continue to maintain our capability to be able to respond in the awful event of global conflict, as well as to respond to these crisis and contingencies. We must maintain a well-planned, well-equipped and young aircraft inventory.

Today in the U.S. Navy, fully 50 percent of our aircraft are greater than 15 years of age. Our combat aircraft average is about 12 years of age.

AIRCRAFT REQUEST

In the President's fiscal year 1986 budget we are requesting 322 aircraft. This will barely allow us to maintain the present average age across the board. It will help in some specific areas to reduce the age of our fighter airplanes.

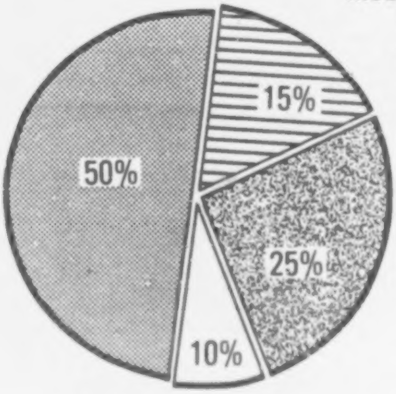
One of the points I would like to make is that we need to maintain the proper level of procurement in order to maintain a vital and young force. I think it is obvious that aircraft, like people as they grow older, need a lot more attention.

The maintenance and reliability of aged aircraft are an increasing problem and the cost of operating them increases as they get older. The procurement request for 1986 is a well-balanced program within the limits of affordability.

Throughout the entire process of developing our APN procurement plan, one of our paramount considerations was recognizing the fiscal environment in which we were operating. As a result we believe we have put together a program before you today that is well-balanced and affordable. I will come back to that a little later.

The request for 1986 is, as mentioned, for 322 aircraft, 241 of which are combat aircraft. The cost for these combat aircraft alone is just over $7 billion.

NAVAL AVIATION FY86



MODERNIZATION 15%
- RESEARCH & DEVELOPMENT
- IMPROVEMENTS TO EXISTING FORCES

READINESS 50%
- PEOPLE
- FUEL
- SPARE PARTS
- TRAINING
- MAINTENANCE

FORCE STRUCTURE 25%
- NEW AIRCRAFT

SUSTAINABILITY 10%
- SPARE PARTS
- MUNITIONS
- NAVAL RESERVE

VIEWGRAPH 1

READINESS

Admiral MARTIN. The slide on your left depicts how we break down our total obligational authority in terms of the four pillars of effectiveness with readiness, 50 percent; modernization, 15 percent; force structure or new aircraft, 25 percent; and sustainability, which is spare parts, engines, munitions, and so forth, 10 percent.

One of the concerns that we all have in looking at the out years is our five year defense plan profile relative to our requirements. This is also being considered.

For your benefit, I will now review several programs of aircraft that I know are of interest to this Committee.

A-6E INTRUDER

- All Weather Day/Night Medium Attack Aircraft
- Target Recognition Attack Multisensor (TRAM)

Viewgraph 2

A-6E INTRUDER

Admiral Martin. First, the A-6E Intruder. This is the only true all-weather, deep interdiction strike aircraft in production in the free world today.

My personal background is light attack flying A-4, A-7 and F/A18 aircraft. But as an operational commander for the last 10 straight years, we have learned to rely on the A-6E Intruder for contingency planning and for its deep strike capability, using the modern technologies provided. I consider the A-6E as one of the most urgently required aircraft that we are requesting, one that we will be operating for a great number of years.

This airplane has been criticized by some as being 1950's technology. The airframe, indeed, is to a great degree 1950's technology, but it stops just about there.

The new technology weapons and system integration that will be incorporated into the A-6E will become the A-6 of the future. The A-6F, which will provide us the capability to go extraordinary distances at low level and carry a tremendous payload in the most adverse weather conditions.

A-6 F/A-18 COMPARISON

I will make something of a comparison between the A-6 and the strike fighter, the F/A-18; but before I do, I would like to emphasize that as the Deputy Chief of Naval Operations for Air Warfare and responsible to be sure we fulfill ouir requirements. I consider the A-6 to be probably one of our most capable airplanes we are requesting. This year we are requesting a total procurement of six.

A-6 WING FATIGUE PROBLEM

As you are well aware, there has been a wing fatigue problem with the A-6. I would like to clear this up if I can at this time.

When the A-6 was designed in the 1950's the specifications called for a wing which had a 2,250 hour expected fatigue life.

Subsequently, during the 1960's, with the methodology then employed, it was anticipated and hoped that this wing fatigue life could be extended to 4,400 hours. This was reviewed in the recent years and it was determined that those expectations could not be realized, that the wing life was indeed as originally planned, about 2,250 hours.

If you would like, I could go into the detail of how this is determined.

We presently have grounded some of these aircraft because of wing life fatigue. At this time we have 57 wings produced, or are under contract, that are funded as replacement wings.

This is not a new problem. We have been actually replacing the wings on the A-6's since 1978. We are looking at a program that will allow for the re-winging and have all of the aircraft re-winged by 1988.

Again, we had hoped that the wing that is presently on the airplane could be extended out to 4,400 hours. It cannot, so we are back to where we were when we originally laid out this specifications on it.

We have gone into a competition to produce a new wing for the A-6 which will be indeed a 4,400-hour wing and we will require warranties on this wing and will provide contract incentives for any weight reduction that can be made during the production of this new wing.

Admiral Busey on my left will be examining the bids that come in and we expect a selection will be made in the very near future.

A-6E INVENTORY

The A-6E inventory that we have today is 353 aircraft and we have an A-6 aircraft request in 1986 for 6 aircraft with a unit flyaway cost of $21.7 million.

There is a Congressional Budget Office report which expresses concern that we are buying too many of one type of aircraft and too few of others.

While the Congressional Budget Office's report is predicated on some factors with which we do not entirely agree, we are not in total disagreement with it either. One of the issues raised in the CBO report is that we were going to have too many F/A-18's and too few A-6's as the years go by.

F/A-18 PURCHASES

One of the reasons we are buying more F/A-18's, requesting 84 for this year, is to take advantage of the favorable procurement rate of a large number buy of aircraft, but that is not the principal reason. The principal reason is that we are trying to phase out our older A-7 aircraft and man the fleet with the modern F/A-18 as soon as we possibly can. This is not to say that the F/A-18's are going to replace the A-6's, because they are not.

It is an entirely different machine.

We do agree with the Congressional Budget Office report that there will be some surplus aircraft in the 1990's and there will be some shortfalls. We believe, however, that they are overstated.

The Congressional Budget Office report addresses our national air wing and a certain number of airplanes in each squadron which is different from ours. The F/A-18 surpluses addressed in the Congressional Budget Office's study are transient in nature and they reflect near-term economical procurement rates.

ADVANCED TACTICAL AIRCRAFT

Returning to the A-6 and to clear up what we are going to do in the future. We anticipate maintaining the A-6 in our inventory until it is replaced by the Advanced Tactical Aircraft, a very high technology aircraft, to meet the threats in the late 1990's and into the next century.

It is anticipated that the Advanced Tactical Aircraft will be a multi-mission aircraft designed as a replacement for the A-6. It will incorporate the latest state of the art technology and it is in conceptual development at this time.

The present A-6 has been updated throughout its years. We have today in our A-6's, mult-moded radar, high-speed computers, and laser and infrared systems to improve bombing accuracy and target locating capability.

The F/A-18 is a clear air mass strike fighter whereas the A-6 is a long-range deep interdiction, true all-weather aircraft.

A-6E FLIGHT TEST

Just 2 weeks ago we had four A-6E's take off from Oceana, VA, loaded with MK-83's that weighed 1,000 pounds apiece. They flew non-stop in a high profile, then a low level ingress into a target complex in Fallon, NV.

They egressed low level, climbed high and flew back to Oceana, VA, all non-stop, employing all of the sensors of the aircraft in a true all-weather mode. This was done on their own initiative and we received the report on it the other day and were most impressed with this demonstration flight which exceeded some 4,500 miles.

Senator CHILES. With refueling?

Admiral MARTIN. Yes, indeed. Senator Chiles, I think the total refuelings were three on that.

That is an enormous distance to cover in any airplane and particularly to do a low ingress-egress flight profile.

Senator STEVENS. Admiral, I have to leave at 10:45. I would appreciate it if you would let General Smith have a chance to speak.

A-18 HORNET

Admiral MARTIN. Yes, I will. Let me address the F-18 Hornet very quickly.

This is a strike fighter. It is carrying out the role of both the attack and the fighter aircraft. It is deployed now in the Indian Ocean embarked in U.S.S. *Constellation* for its first deployment.

We recently had a night supersonic missile shot with a direct hit against a target drone. The F/A-18 is meeting all expectations, we are very pleased with it. It can perform both in the role of a fighter or an attack aircraft.

Because you never need to use all of your figher or attack aircraft in any given period of time, the Hornet provides an overall synergistic effect by increasing either the number of attack airplanes or fighter airplanes.

This is an adjunct in terms of the strike capability to the A-6. It is not a replacement for it.

On January 1, this year, we had 154 F/A-18's in our inventory. We are requesting 84 in 1986. The unit flyaway cost for the F/A-18 is $21.1 million.

AV-8B HARRIER

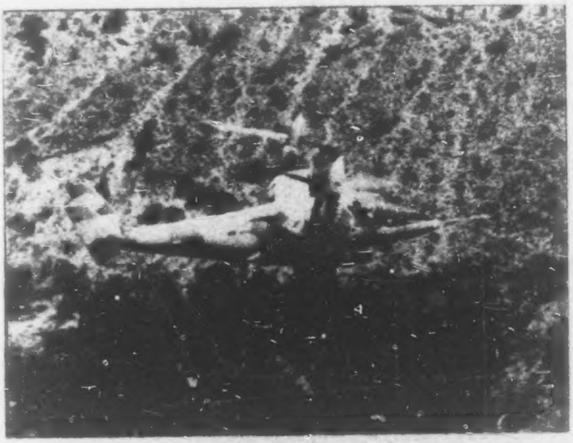
The next airplane I will discuss briefly is the AV-8B Harrier. In the interest of time, I will defer to General Smith to give a more detailed discussion of the AV-8B.

We are very pleased with the AV-8B compared to the earlier model AV-8A. It is carrying out all its missions. It has been introduced successfully in the fleet. There are 20 in the inventory right now. Our total program is for 328 of these aircraft. The fiscal 1986 request is 46, with a flyaway cost of $16.6 million.

V-22A OSPREY

I would like to discuss next the V-22A Osprey, formerly known as the JVX. This is probably the most radical and exciting airplane that has been developed with a capability and potential that we have not seen since the introduction of the helicopter.

V-22A OSPREY



- Multi-Service/Multi-role
- Marine Corps., Navy, Air Force, Army
- USMC - Assault transport
- USN - Multi-mission: Combat Rescue, Special Warfare, Logistics
- USAF - Special Operations
- USA - Assault Lift/Support, MEDEVAC

VIEWGRAPH 3

MULTIMISSION CAPABLE AIRCRAFT

This is not the prototype; rather it is a technology demonstrator, the Bell XV-15.

This will provide the Navy and the Marine Corps with a multimission capable aircraft for the 1990's and beyond, principally to be used for naval services by the Marines as an assault aircraft, with long-range, high-speed, vertical takeoff and landing capabilities. It acts like a helicopter, and flies like an airplane.

We are looking conceptually at this airplane for a host of applications: Antisubmarine warfare, communications linkages, carrier on-board delivery, vertical on-board delivery, search and rescue and ASW.

I know there has been some discussion about the amount of money that is required in terms of R&D, $603.7 million to continue the R&D effort, but when you compare this with other programs, the V-22 is actually less, certainly not more than other programs.

I do have some comparison figures available to show you if you so desire.

We have compared this with the recently developed F/A-18, for example, and we find a noteworthy statistic. The V-22 today is 3 years from production and we are allocating only 9 percent of the Navy's RDT&E budget to it.

I stand corrected. On the F/A-18 we allocated 9 percent of the Navy's RDT&D budget. For the V-22 portion of the fiscal year 1986 budget it is only 4.5 percent.

Relative to other alternatives available to put our Marines ashore, this airplane stands head and shoulders above the alternatives which are currently the CH-46 and CH-53E helicopters.

I would like to ask General Smith to address that in a moment.

E-6A REQUEST

There is a need today for another airplane which is the E-6A, and as you indicated, we will discuss this in closed session. We are requesting, and support the President's budget, two E-6A's to replace our aging EC-130's. These aircraft are designed to provide strategic connectivity.

The two aircraft we are requesting for fiscal year 1986 have a unit flyaway cost of $76.3 million.

Mr. Chairman, I will defer any further comments in order to allow General Smith to continue.

[The statement of Admiral Martin follows:]

PREPARED STATEMENT OF VICE ADM. EDWARD H. MARTIN

DEPUTY CHIEF OF NAVAL OPERATIONS

MR. CHAIRMAN AND DISTINGUISHED MEMBERS OF THE COMMITTEE: IT IS A PRIVILEGE TO APPEAR BEFORE YOU TODAY TO PRESENT AND DISCUSS THE NAVY'S FY 1986 REQUEST FOR AIRCRAFT PROCUREMENT.

THE PROCUREMENT OF TODAY'S HIGHLY SOPHISTICATED WEAPONS SYSTEMS - THE AIRCRAFT, THE MISSILES, THE OTHER ORDNANCE, THE SPARE PARTS, THE SUPPORT EQUIPMENT - IS A VERY EXPENSIVE AND COMPLEX PROPOSITION. AT EACH STEP OF THE BUDGET FORMULATION PROCESS WE PAY CONSTANT ATTENTION TO KEEPING COSTS DOWN AND CAPABILITY UP, TO GETTING THE BEST POSSIBLE DEFENSE - ONE WHICH WORKS - AT AN AFFORDABLE COST. THE AIRCRAFT PROCUREMENT, NAVY (APN) BUDGET REQUEST FOR FY 1986 REPRESENTS JUST OVER 5 PERCENT REAL GROWTH OVER THE FUNDS APPROPRIATED IN THE FY 1985 CONTINUING RESOLUTION ADOPTED LAST YEAR BY THE CONGRESS. THE REAL GROWTH IN APN FROM FY 1984 TO FY 1985 WAS APPROXIMATELY 2 PERCENT.

THAT REAL GROWTH MUST BE DISTRIBUTED TO ALL FOUR PILLARS OF FORCE EFFECTIVENESS: READINESS, SUSTAINABILITY, MODERNIZATION AND FORCE LEVELS.

OVER THE LAST FOUR YEARS WE HAVE MADE SUBSTANTIAL PROGRESS IN REVERSING THE ADVERSE TRENDS CREATED IN ALL FOUR OF THOSE PILLARS BY THE NEGLECT WHICH OCCURRED DURING THE 1970'S.

THE NEW AIRCRAFT AND SYSTEMS WE HAVE PROCURED, AND THE SUPPORT WE ARE PROVIDING THEM, HAVE REVITALIZED OUR CARRIER AIR WINGS, OUR PATROL WINGS, OUR MARINE AIR WINGS AND OUR SUPPORT FORCES.

THE READINESS INDICATORS OF OUR FORCES HAVE CONTINUED TO RISE, DESPITE THE FACT THAT THE NAVY'S OPERATIONAL COMMITMENTS HAVE BEEN INCREASING. FOR EXAMPLE, OUR CARRIER FORCES OPERATE AT A TEMPO ALMOST 15 PERCENT GREATER THAN AT THE PEAK OF THE VIETNAM WAR. CARRIER PRESENCE IS MANDATED BY THE NATIONAL COMMAND AUTHORITY IN A VARIETY OF PLACES THROUGHOUT THE WORLD TODAY - THE MEDITERRANEAN, THE NORTH ARABIAN SEA, THE WESTERN PACIFIC.

THAT "OP TEMPO" IS EXPENSIVE, AND TAKES ITS TOLL ON MAN AND MACHINE. NONETHELESS, OUR FISCAL INVESTMENTS OVER THE PAST FEW YEARS HAVE ENABLED US TO IMPROVE OUR PREPAREDNESS FOR CONFLICT WHILE MAINTAINING THAT PACE.

AN IMPORTANT MEASURE OF OUR AVIATION READINESS IS THE AIRCRAFT MISSION CAPABLE (MC) RATE, DEFINED AS THAT PERCENTAGE OF THE 24 HOUR DAY AN AIRCRAFT IS CAPABLE OF LAUNCHING TO PERFORM ONE OR MORE OF ITS ASSIGNED MISSIONS. OUR FLEET-WIDE AIRCRAFT MC RATE HAS RISEN IMPRESSIVELY, FROM ROUGHLY 57 PERCENT IN 1981 TO JUST UNDER OUR GOAL OF 70 PERCENT IN FY 1984. I FULLY EXPECT THAT WE WILL SURPASS THAT GOAL IN FY 1985, AND IN FY 1986 WE WILL RAISE THE GOAL TO 73% PERCENT - AND ACHIEVE IT BY FY 1988.

MANY THINGS HAVE CONTRIBUTED TO THIS DRAMATIC IMPROVEMENT IN OUR READINESS. WE HAVE BEEN DELIVERING TO THE FLEET NEWER, MORE CAPABLE, AND MORE RELIABLE AIRCRAFT. FOR EXAMPLE, THE F/A-18 REQUIRES LESS THAN HALF THE MAINTENANCE MAN HOURS OF THE F-4 AND A-7 WHICH IT IS REPLACING; IT FLIES MORE THAN THREE TIMES THE FLIGHT HOURS OF THOSE AIRCRAFT BEFORE CORRECTIVE MAINTENANCE IS REQUIRED. THAT IS A TRIBUTE TO THE TECHNOLOGICAL SOPHISTICATION OF AMERICAN INDUSTRY, AND ALSO ILLUSTRATES ANOTHER IMPORTANT POINT - THE EFFECT OF AIRCRAFT AGE.

THE AGE OF THE NAVY'S AIRCRAFT INVENTORY IS A MAJOR FACTOR CONTRIBUTING TO OUR READINESS. OLDER AIRCRAFT ARE LESS RELIABLE AND MORE EXPENSIVE TO MAINTAIN AND OPERATE. FURTHERMORE, MODERNIZATION OF EXISTING AIRCRAFT TO MEET EVER MORE SOPHISTICATED THREATS, IS AN EXPENSIVE BUT OFTEN NECESSARY PROPOSITION.

TO BE EFFECTIVE, OUR AIRCRAFT, LIKE OUR PEOPLE, MUST BE YOUNG AND VITAL. WE ARE LOSING GROUND IN THAT REGARD.

IN FY 1973, AT THE END OF OUR PARTICIPATION IN THE VIETNAM WAR, THE AVERAGE AGE OF OUR AIRCRAFT INVENTORY WAS 8.3 YEARS. THAT YEAR WE PROCURED 297 AIRCRAFT, BUT THE AVERAGE AGE INCREASED TO 9.5 BY THE TIME THOSE AIRCRAFT WERE DELIVERED IN FY 1975, AND TO 9.8 IN FY 1976. ANNUAL AIRCRAFT PROCUREMENT DECREASED, TO A LOW OF ONLY 125 AIRPLANES IN FY 1980. THE AVERAGE AGE CONTINUED TO INCREASE, AND BY FY 1980 THE AVERAGE AGE WAS 11.4 YEARS. BY 1983, WHEN THE FULL EFFECTS OF 1978, 1979, AND 1980 PROCUREMENT POLICIES WERE EVIDENT, IT WAS 12.4. SINCE 1980 WE HAVE SLOWED THE AGING PROCESS, BUT HAVE YET TO TURN THIS ADVERSE EFFECT AROUND. TODAY, THE AVERAGE AGE OF OUR AIRCRAFT INVENTORY IS 12.6 YEARS. TWO THIRDS OF THE NAVY'S AIRCRAFT ARE OVER 10 YEARS OLD AND MORE THAN FIFTY PERCENT ARE OVER FIFTEEN.

WITH THE 322 AIRCRAFT PROCUREMENT PROGRAM WE HAVE OUTLINED IN THE FY 1986 BUDGET REQUEST, I HOPE TO BE ABLE TO RETURN NEXT YEAR AND TELL YOU THAT THE FORCE IS YOUNGER THEN THAN IT WAS TODAY AND THAT THE TREND WILL CONTINUE. TO MAKE THAT POSSIBLE, YOUR CONTINUED SUPPORT FOR SUBSTANTIAL REAL GROWTH IN AIRCRAFT PROCUREMENT OVER THE FIVE YEAR DEFENSE PLAN (FYDP) IS VITAL.

TO HELP BALANCE THE EFFECTS OF THE 12.6 YEAR AVERAGE AGE OF THE AIRCRAFT INVENTORY, WE PLACE MUCH IMPORTANCE ON UPGRADING EXISTING AIRCRAFT THROUGH THE AIRCRAFT MODIFICATION PROGRAM, FUNDED BY APN BUDGET ACTIVITY 5. MANY NAVY AIRCRAFT NOW IN THE INVENTORY WILL PERFORM MISSION SERVICE THROUGH THE YEAR 2000 AND BEYOND. THIS WILL REQUIRE PERIODIC CONFIGURATION IMPROVEMENTS TO INCREASE SERVICE LIFE, SOLVE IN-SERVICE SAFETY PROBLEMS, AND ADD WEAPONS CAPABILITIES ATTENDANT TO THE CHANGING THREATS. MAJOR INITIATIVES THIS YEAR IN THE MODIFICATION PROGRAM ARE DESIGNED TO PROVIDE RELIABILITY, MAINTAINABILITY AND CAPABILITY UPGRADES TO THE A-6, F-14, F/A-18, H-2, H-3, P-3, S-3 AND E-2 AIRCRAFT. ADDITIONAL EMPHASIS IS DIRECTED TOWARD SUPPORT OF COMMON AVIONICS IMPROVEMENTS WHICH WILL PROVIDE OUR AIRCRAFT WITH IMPROVED RELIABILITY IN FLIGHT EQUIPMENT. COMMON ELECTRONIC COUNTER-MEASURES IMPROVEMENTS WILL INCREASE AIRCRAFT SURVIVABILITY IN THE HOSTILE ENVIRONMENT OF MODERN WARFARE.

TO ACCOMPLISH BOTH THE QUALITATIVE AND QUANTITATIVE IMPROVEMENTS TO OUR FORCE PREPAREDNESS (I.E., MODERNIZATION AND FORCE LEVELS) WE HAVE PURSUED A NUMBER OF PROCUREMENT INITIATIVES. WE HAVE HAD CONSIDERABLE SUCCESS IN BRINGING DOWN THE COST OF AVIATION WEAPONS SYSTEMS BY THE APPLICATION OF SOUND BUSINESS AND CONTRACTING TECHNIQUES AND STRATEGIES.

COMPETITION AND DEVELOPMENT OF DUAL SOURCES HAVE BECOME AN INTEGRAL PART OF OUR APPROACH TO ACQUISITION MANAGEMENT. INTENSIVE REVIEWS ARE MADE OF PROGRAMS WHICH HAVE TRADITIONALLY BEEN "SOLE SOURCE". OUR GOAL IS TO CHALLENGE AND BREAKDOWN PREVIOUS BARRIERS TO COMPETITION AND MAKE IT EASIER TO COMPETE A PROGRAM THAN TO GO SOLE SOURCE. WE ARE POSITIONING OURSELVES TO SUSTAIN GROWTH IN COMPETITION IN THE LONG TERM. EMPHASIS HAS BEEN PLACED ON THE DEVELOPMENT OF DUAL SOURCES. THERE ARE PRESENTLY 25 MAJOR SYSTEMS OR SUBSYSTEMS THAT HAVE A SECOND SOURCE, OR ARE IN THE PLANNING STAGE FOR DUAL SOURCING. THESE EFFORTS ARE PAYING IMPRESSIVE DIVIDENDS. COMPETITIVELY AWARDED CONTRACTS INCREASED FROM $.8 BILLION IN FY 1983 TO $1.60 BILLION IN FY 1984 AND THE PERCENT OF AWARDS INCREASED FROM 9.3 TO 16.5 PERCENT. IN FY 1985 WE EXPECT TO LET OVER $2 BILLION IN COMPETITIVE CONTRACTS AND ACHIEVE A COMPETITION PERCENTAGE GREATER THAN 20 PERCENT.

WE HAVE TAKEN AGGRESSIVE ACTION TO CONTROL THE COST OF AIRCRAFT WEAPONS SYSTEMS. WE ARE PERFORMING INTENSIVE REVIEWS OF SUBCONTRACTOR COSTS, WHICH REPRESENT 40-60 PERCENT OF THE TOTAL PRICE OF A MAJOR WEAPONS SYSTEM. IN THE PAST, THE PRIMARY RESPONSIBILITY FOR MANAGING THE CHARGES BY SUBCONTRACTORS WAS ASSIGNED TO THE PRIME CONTRACTOR. HOWEVER, AS IT BECAME APPARENT THAT THE PRIMES WERE NOT PLACING THE PROPER EMPHASIS ON THIS EFFORT, WE TOOK A MORE AGGRESSIVE ROLE IN THE REVIEW AND APPROVAL OF SUBCONTRACTS. LABOR RATES OF BOTH THE PRIME AND THE SUBCONTRACTORS HAVE BEEN CLOSELY MONITORED AND UNREALISTIC INCREASES HAVE BEEN DISALLOWED. OVERHEAD COST REVIEWS OF MAJOR PRIME CONTRACTORS HAVE BEEN CONDUCTED TO PROVIDE A BETTER INSIGHT INTO THE COSTS ASSOCIATED WITH OVERHEAD CHARGES. THE SUCCESS OF THESE EFFORTS IS CLEAR. COMPARED TO FY 1983 COSTS, THE TOTAL AIRCRAFT FLYAWAY COSTS FOR AIRCRAFT PROCURED IN FY 1984 WERE 6 PERCENT LOWER. OF THE CONTRACTS AWARDED IN FY 1984, VIRTUALLY ALL WERE FIXED PRICE TYPE CONTRACTS, PRECLUDING THE POSSIBILITY OF COST OVERRUNS.

WE WILL CONTINUE TO SEEK MORE EFFICIENT WAYS TO REDUCE THE COSTS OF WEAPONS SYSTEMS WHILE ENSURING THAT QUALITY AND PERFORMANCE ARE MAINTAINED AT LEVELS REQUIRED TO MEET FLEET READINESS NEEDS. DATA AVAILABLE TO DATE INDICATE THAT OUR PERFORMANCE IN CONTROLLING AIRCRAFT WEAPONS SYSTEMS COSTS, AND IN INCREASING COMPETITION, WILL BE EVEN BETTER IN FY 1985.

THE NAVY IS FULLY AWARE OF, AND SHARES, CONGRESSIONAL CONCERN OVER THE NUMBER OF PRODUCTION LINES OPEN TO PROVIDE AIRCRAFT FOR NAVAL AVIATION. LAST YEAR WE ADVISED YOU THAT WE WOULD REDUCE THE NUMBER OF PRODUCTION LINES FROM OUR PRESENT 16, TO 14 IN FY 1986, 12 IN FY 1987 AND 11 IN FY 1989. WE CONTINUE TO WORK TO THAT END. THE START OF PROCUREMENT FOR THE E-6A, AND ONE ADDITIONAL YEAR OF SH-2F PROCUREMENT, LEAVE US WITH 16 LINES IN FY 1986. OUR DECISION TO CONTINUE PROCUREMENT OF THE A-6E WHILE DEVELOPMENT OF THE A-6F IS UNDERWAY, WILL

FURTHER DELAY BY ONE YEAR TO 1990 THE ORIGINAL GOAL OF ELEVEN PRODUCTION LINES.

AMONG THE PRIME ELEMENTS OF MATERIAL READINESS ARE AVIATION AVIATIONSPARES, AIRCRAFT DEPOT REWORK AND SUPPORT EQUIPMENT. THIS APRIL, WE START THE AVIATION PORTION OF THE NAVY'S TEST OF STOCK FUNDING BY INCLUDING AVIATION REPAIRABLES. WE EXPECT THE SAME EXCELLENT RESULTS THAT WERE ACHIEVED IN THE NON-AVIATION REPAIRABLES TEST. THE PARTS WILL BE AVAILABLE IN THE FLEET. ANTICIPATED BENEFITS INCLUDE AN INCREASED NUMBER OF AVIATION COMPONENTS REPAIRED, AN INCREASE IN OUR "READY-FOR-ISSUE" SHELF STOCKS, AND AN EARLY BOOST TO BOTH READINESS AND SUSTAINABILITY.

HAND-IN-HAND WITH ADVANCES IN THE REGULAR AVIATION FORCE ARE INITIATIVES TO UPGRADE THE NAVAL AIR RESERVE. BOTH RESERVE AIR WINGS ARE RECEIVING MODERN AIRCRAFT, INCLUDING THE F-14, F/A-18, A-7E, AND E-2C. IN ANOTHER IMPORTANT PROGRAM, RESERVE SQUADRON AUGMENT UNIT (SAU) CREWS BEGAN TRAINING WITH FLEET READINESS SQUADRONS (FRS) LAST YEAR. THESE RESERVE SAU CREWS FLY THE SAME A-6, F-14 AND S-3 AIRCRAFT AS THEIR GAINING COMMANDS. WE PLAN TO EXPAND THE SAU PROGRAM AT FLEET READINESS SQUADRON SITES TO INCREASE OUR TOTAL FORCE READINESS. WE ALSO HAVE A MASTER AUGMENT UNIT (MAU) AT BRUNSWICK, MAINE IN WHICH RESERVE AIR CREWS FLY THE LATEST VERSION OF THE P-3, THE SAME AIRCRAFT THEY WILL FLY IF MOBILIZED. WE HAVE PLANS TO EXPAND THE MAU PROGRAM TO MOFFETT FIELD, CALIFORNIA AND TO JACKSONVILLE, FLORIDA.

I AM PARTICULARLY CONCERNED WITH ONE AREA OF NAVAL AVIATION, OUR FLYING HOUR PROGRAM. FLYING HOURS ARE AN ESSENTIAL ELEMENT OF BOTH READINESS AND SUSTAINABILITY, PROVIDING FOR PEACETIME AIRCREW TRAINING AS WELL AS FULFILLING REAL WORLD OPERATIONAL COMMITMENTS. WHILE OVERALL NAVY FLYING HOURS HAVE INCREASED IN RECENT YEARS WE HAVE EXPERIENCED A CONCURRENT INCREASE IN OUR COMMITMENTS.

OUR ANNUAL FLYING HOUR PROGRAM IS CONSTRUCTED TO BALANCE THE REQUIREMENTS OF INDIVIDUAL AIRCREW TRAINING AND FLEET OPERATIONS. TRAINING FLYING HOURS FOR TACTICAL AND ASW SQUADRONS ARE BASED ON REQUIREMENTS COMPUTED IN TERMS OF PRIMARY MISSION READINESS (PMR), DEFINED AS "THOSE HOURS REQUIRED TO MAINTAIN THE AVERAGE FLIGHT CREW QUALIFIED AND CURRENT TO PERFORM THE PRIMARY MISSION OF ITS AIRCRAFT, TO INCLUDE ALL WEATHER/DAY/NIGHT CARRIER OPERATIONS AS APPROPRIATE." IN LARGE PART, WORLD EVENTS DRIVE FLEET OPERATIONS. UNFORSEEN INCREASES IN PRESENCE OPERATIONS AND CONTINGENCY RESPONSES TO WORLD EVENTS DISRUPT THE BALANCE BETWEEN TRAINING AND OPERATIONS. THE PROBLEM IS ONE OF AFFORDABILITY. WE DO NOT HAVE THE FISCAL RESOURCES TO TRAIN AT REQUIRED LEVELS AND STILL SUPPORT AN INCREASED OPERATING TEMPO. IN EFFECT, FLEET COMMANDERS MUST SATISFY THE INCREASED FLYING REQUIREMENTS OF DEPLOYED OPERATIONS AT THE EXPENSE OF INDIVIDUAL SHORE-BASED TRAINING WHENEVER UNFORSEEN COMMITMENTS ARISE. THERE ARE NO SIMPLE SOLUTIONS BUT FISCAL CONSTRAINTS ARE A FACT OF LIFE TO OUR DECISION MAKING PROCESS.

RECOGNIZING THIS, WE WORK HARD TO DEVELOP OUR FLYING HOUR MANAGEMENT PLAN, WHICH IS PRESENTLY PROGRAMMED TO ACHIEVE A FLEET WIDE 87 PERCENT PRIMARY MISSION READINESS (PMR) RATE FOR TACTICAL AND ASW SQUADRONS IN FY 1986. THIS IS A 4 PERCENT INCREASE OVER OUR FY 1983 PLAN.

THE BIGGEST SHARE OF OUR FISCAL RESOURCES GOES TO PROCUREMENT OF AIRCRAFT AND WEAPONS WHICH WILL KEEP NAVAL AVIATION STRONG. OUR PRIMARY OBJECTIVE IS TO IMPROVE THE COMBAT CAPABILITY OF OUR FORCES THROUGH STEADY AND BALANCED PROGRAMS. NAVAL AVIATION IS THE CORNERSTONE OF OUR MARITIME FORWARD DEFENSE STRATEGY AND REQUIRES A MODERN AND BROAD SPECTRUM OF WARFIGHTING CAPABLE PLATFORMS. THE AIRCRAFT PROCUREMENT PLAN PRESENTED TO YOU IS DESIGNED TO PLACE OUR SCARCE RESOURCES IN THOSE PROCUREMENT PROGRAMS THAT WILL BEST MEET THE DEMANDS OF OUR MARITIME STRATEGY.

STATEMENT OF LT. GEN. K.A. SMITH

MARINE CORPS ACTIVITIES

General **SMITH**. Thank you, Mr. Chairman, for the opportunity to appear here.

I, too, have submitted a formal statement for the record. There are a few things, though, that I would like to touch on briefly.

First of all, Marine aviation is an integral part of naval aviation and we share in the management, leadership and operation of the airplanes that the Navy operates.

In the Marine Corps we are organized and equipped to provide an air-ground and logistics force, MAGTF. As such we are tailored especially to provide a synergistic effect in which the air element is a significant part of that force.

One of the integral parts of that capability is vertical assault. We have a requirement to lift the assault elements of two regiments, which is about 8,000 men and 360 vehicles into the objective area: a distance of 50 miles, within 90 minutes.

V-22 AIRCRAFT

In the search for replacement airplanes for those that now do that mission, which is primarily the CH-46 ECHO, we looked to a number of alternatives which included the CH-47, the H-60 the Army operates, and our own CH-46. None of them for one reason or another could perform the missions of the 1990's and beyond which required of us to execute that primary task of vertical assault into a hostile shore, a distance of 50 miles in 90 minutes.

So, we selected the V-22 as a replacement article which Admiral Martin has briefly discussed. It has some features which are very attractive to us. One is that it is self-deployable for a distance of 2,100 nautical miles.

As an example, if we were to forward deploy to England or an offshore place in Europe, we could move a combat-loaded force to north Norway and return to England for reconstitution. It gives us the capability to move the force independent of shipping or airlift.

The V-22 is in the R&D phase now and has a significant ramp up from last year, from $180 million to a little over $600 million. This is essential to meet the 1991 initial operational capability because in 1991 the CH-46 force that we operate today will start to fall below the fundamental capability I have described: to lift in 90 minutes, and 50 miles, the assault element with two regiments.

So, the V-22 is a must for us if we are to retain that capability for this Nation. Those dollars that we are asking for will essentially buy six full systems development airplanes, a production engine, and the money for naval management.

It is a classic program and has already incited the interest for far greater use than that which is now described. The current total procurement is 913 airplanes.

As I said earlier, there is additional interest for other missions. The Army, Air Force, Navy and Marine Corps are all participating.

AV-8B

The next airplane that turned out to be a fine piece of machinery for the Marine Corps is the AV-8B. One of the principal features in the procurement of this airplane was to solve the 20-minute equation of close air support.

What does that mean? Simply stated, if the guy on the ground calls for air support to solve the problem for him, and if it is not provided within 20 minutes, history has shown that the outcome will be solved by some other means, quite often unfavorably.

Now, we are routinely forward basing this airplane, co-located at regimental headquarters, for the pilots to stay abreast of the tactical situation. When called for a strike, we lift off and within an average of less than 5 minutes from call to drop they are putting ordnance on the target.

One of the features of the AV-8B is less than a 10 mile accuracy system which gives us an improvement of 10 versus 40 miles, for example in an F-4 or an A-4.

So, it is going well. The operational evaluation is complete, and in Admiral Carter's words, it is one of the most successful evaluations he has observed in the 4 years he has been in command.

We are transitioning now to the AV-8B at Cherry Point, VMA-331 is equipped as is the training squadron, VMAT-203. The next squadron to standup this summer is VMA-542.

The accident rate has come down from double digits to less then 4.5 per 100,000 flying hours. The big factor in the reduction of accidents is the "T" model which gives us the capability to start flying the new transition pilots in a double crew airplane for the initial phases of training.

We are buying, or we are hoping to buy with your help, additional TAV-8B's so we can continue to solve this training and transitioning problem. There is money in this year's budget for that purpose.

I might point out that the AV-8B is the only tactical airplane in the U.S. inventory today that does not have in existence a two-seat trainer to support it.

There are 46 AV-8B's in the budget this year for a little over $1 billion.

NIGHT ENHANCEMENT PROGRAM

I would like to touch briefly on a growth program that we undertook last year with your help.

In the F-18 and the AV-8B, it is called night enhancement where we have added a fixed FLIR, night vision goggles, compatible lighting, heads-up and heads-down displays, and moving maps. The F-18 and AV-8B are the two candidate aircraft to get this enhancement.

Gentlemen, the night enhancement program turns midnight into high noon and gives us the capability to operate, not in all weather conditions, but in reduced visibility and certainly in clear air mass 24 hours a day.

With the accuracy of those systems that were designed into them, both less than 10 mil drop systems, we have the capability to support the ground commander in the fashion and in the depth required to ensure his success.

[The statement of General Smith follows:]

PREPARED STATEMENT OF LT. GEN. K. A. SMITH

DEPUTY CHIEF OF STAFF FOR AVIATION, MARINE CORPS

Mr. Chairman; Distinguished Members of the Committee:

Thank you for this opportunity to appear before you today to present my first status report on Marine Corps Aviation. With the steadfast support of the Congress, this past year Marine Corps aviation enjoyed its most productive year in recent history. In all categories, the indicators clearly point towards greater efficiency, productivity, and effectiveness which result in the conservation of precious men and material. Likewise, the modernization efforts which have received your continued support throughout past years are on speed and on course. My report to you today will focus on the direction of Marine aviation, its performance in 1984, and the programs which have been presented for your consideration in FY86.

Marine Corps Aviation finds its genesis in the National Security Act passed by the Congress in 1947. Consistent with this statute, the Marine Corps is organized, equipped, and trained primarily as an amphibious force of combined arms featuring ground, air, and logistics elements. The principles which guide the employment of this Marine air-ground-logistics team necessitate a delicate balance between the number and types of supporting arms. These requirements provide a basis for a fully integrated, mission oriented, Marine air-ground task force (MAGTF) specifically tailored to prosecute any mission that may be assigned.

As the air supporting arm of the MAGTF, the air combat element (ACE) provides the equipment and forces which are a key component in the overall combat power equation of the MAGTF. By virtue of the mobility required of amphibious forces, Marine ground forces are relatively lightly armed and manpower intensive. Accordingly, the Marine Corps does not incorporate organically the heavy supporting arms and equipment to the degree or in the numbers which characterize many other modern ground forces. Instead, Marine aviation is structured to provide fully integrated, lethal, versatile and responsive firepower as well as tactical mobility and logistical supportability to the MAGTF Commander. This conscious and essential integration of air support requires continuous availability and permeates the full spectrum of Marine Corps capabilities. With an appreciation for the essentiality of Marine aviation in complementing the total Marine Corps capability, a framework for discussing the objectives of Marine aviation may be structured within the context of the four pillars of combat capability: readiness, sustainability, modernization and force structure.

No military force in the world views readiness with the same keen sensitivity as your Marine Corps. Readiness has been a trademark throughout our 209 year history. World events in just the past year have again demonstrated the readiness, flexibility, and ability of the Marine Corps to rapidly respond to the national command authority with unqualified effectiveness. As was demonstrated in Grenada, Marine aviation stands ready to support the ground and logistics elements as never before. Our top priority has been and will continue to be to build and maintain a ready, effective air support capability. Marine aviation training readiness has shown a growth of 19 percent over the past four years. With your splendid support, we have an obligation to provide continued improvement.

While readiness allows for the quick and decisive introduction of Marines, sustainability provides the Corps with the ability to continue the campaign to a successful conclusion. As you are aware, major gains have been recorded in this area over recent years, but much work remains to be done. In Marine aviation, growth to inventory objectives is on track; however, programmed ordnance, fuel, and spares must continue to be procured at the planned rate and to designated levels. Integral to sustainability is logistics simplicity. In this regard, we are intent on reducing the types of aircraft and equipment we operate. Also implicit in sustainability are not only the means for support, but the ability to transport and distribute these means as required. Our planned modernization is improving this capability too.

Modernization enables Marine aviation to provide its essential capabilities in an increasingly complex environment. Aviation has historically been the vanguard of rising technology in this century. Current trends reflect increased sophistication. For these reasons, Marine aviation seeks to remain competitive in its environment with thoughtful, prudent, and balanced modernization efforts developed with due consideration of reliability and cost along with realistic procurement in sufficient numbers to satisfy Marine Corps essential requirements.

Finally, force structure must be viewed with a dedication towards ensuring that adequate flexibility exists to meet the threat in every clime and place, while being ever mindful of potential demographic and economic changes. We continually review the structure of Marine aviation in order to realize the maximum possible gain from the resources available. The requested 199,500 Marine Corps end strength and associated aircraft and equipment will provide adequate force structure to sustain a balanced peacetime force capable of rapid expansion during mobilization. Even with the excellent equipment that you provide, our most valuable resource and the heart of Marine Corps aviation remains the individual Marine and the supporting family. Throughout our long history, the Marine Corps has enjoyed the dedicated service of the finest young men and women this Nation has to offer. Imbued with the values of patriotism, loyalty, and hard work, they have served the Corps and our Nation well. The young Marines of today are no exception. They are challenged to support, often in the austere circumstances of an expeditionary environment, some of the most technologically advanced equipment found in the world. It is due to their ingenuity and perseverance that I am able to report to you the exciting stature of Marine aviation today. I bring this to your attention because of the strong interest Congress has shown in the past concerning personnel, as well as supporting our procurement and operating issues.

Based on the efforts of Congress in the recent past, Marines today enjoy a higher quality of life and enjoy greater job satisfaction than ever before. As a result, Marine aviation is benefiting through unprecedented retention rates. Our pilot attrition, which was over 14 percent a few years ago, now stands at only six and one-half percent. Enlisted personnel, with their expert technical skills and irreplaceable experience, are staying at an unprecedented rate.

As the lives of these Marines have improved, so has their productivity. In 1984, Marine aviation enjoyed an overall aircraft mission capable rate in excess of 76 percent with a full mission rate of greater than 64 percent. This represents a growth of 13 percent mission capable and 28 percent full mission capable over the past four years. This improved aircraft readiness posture in effect provides the nation with the equivalent of an additional 11 squadrons of ready aircraft.

Concurrent with improvements in personnel and aircraft readiness, our operational performance has improved as well. Last year our tactical air squadrons flew 339,000 hours. This represents the most flight hours flown in a single year since Vietnam. Equally important in 1984 was the fact that Marine aviation enjoyed a lower aircraft mishap rate — 4.65 rate per 100,000 hours — than ever before in its history. This past year we had only 19 aircraft mishaps compared to the 40 mishaps four years ago. In order to sustain this desired level of performance, however, we must continue to pursue a course of adequate flight hour funding combined with safe, professional execution. This involves continuation of the incremental escalation of our flight hour program which began in 1984.

As an outgrowth of increased personnel, aircraft, and operational performance, the combat readiness of Marine Corps aviation training readiness has improved 19 percent over the past four years. This has provided us with the unique opportunity to tighten the standards by which the combat capability of aviation units is measured. Additionally, innovative tactics are continuing to be developed and adopted to meet the challenges facing us around the world. At the forefront of Marine aviation training and tactical development is MAWTS-1, our weapons and tactics squadron at MCAS Yuma, Arizona. This organization not only serves as the focal point of tactical warfare development for aviation, but additionally trains highly skilled fleet aircrews who return to their units as instructors, providing a core of tactical expertise at the unit level.

While this past year's achievements are a source of pride, we are committed to the continued refining of our aviation fighting capabilities for the eventualities of the future. Our modernization efforts towards a more viable and effective fighting force continue. Fiscal year 1986 represents a critical year in the development of our medium lift helicopter replacement. The MV-22A "Osprey," formerly JVX, funding request is essential to the timely developmental production of the six aircraft required for test and evaluation. We believe the MV-22A to be the single greatest development in military aviation since the jet engine. The speed, range, self deployability, and versatility of the MV-22A far outstrips conventional helicopters, and promises tremendous flexibility for tactical employment of forces on the battlefield. The MV-22A wind tunnel tests are exceeding expectations in almost every category of performance. No problems are foreseen in this low risk program as we begin to scale up to full size from the existing 60 percent wind tunnel version. The introduction of the MV-22A is critical for the Marine Corps in order to overcome an existing tonnage lift deficiency and to avert a medium lift shortfall in 1991. For these reasons, the MV-22A is Marine aviation's highest priority program. Your foresighted support for its continued progress is crucial.

The F/A-18, which was introduced to the Marine Corps in 1983, has proven to be a superbly capable and reliable aircraft. We are operating three F/A-18 squadrons in the 3d Marine Aircraft Wing at MCAS El Toro, California. Our first squadron from the 2d Marine Aircraft Wing at MCAS Beaufort, South Carolina, is undergoing transition as I address this committee today. The year of 1985 will also see the first deployment of two Marine F/A-18 squadrons aboard Navy aircraft carriers. In 1986, two more Hornet squadrons will stand up at MCAS Beaufort, South Carolina.

The F/A-18 continues to exceed our expectations in both the air-to-ground and air-to-air role. In the air-to-ground delivery mode, pilots are achieving 35 foot circular error probable rates on combined deliveries. In the air-to-air role, the F/A-18 is an extremely impressive fighter which has proved it can meet all adversaries with confidence.

The reliability and maintainability of the F/A-18 is unprecedented for a system of its complexity. Marine Air Group 11, our first F/A-18 equipped air group, completed fiscal year 1984 with an average annual F/A-18 availability of 81 percent mission capable and a heretofore unheard of 76 percent full mission capable rate. As a result, the maintenance man-hours required to support the F/A-18 have been reduced to less than half those required of its predecessor, the F-4. As with the introduction of any new aircraft however, the F/A-18 has not been entirely without problems. A great deal of publicity surrounded the vertical tail cracks on the F/A-18. Let me state that the cracks resulted from flight at the extreme edge of the operating envelope, and they are being repaired to our satisfaction. The manufacturer has accepted funding liability, and we will be back on delivery schedule in May 1985. We in the Marine Corps believe the effects of this small program perturbation pale in comparison to the capability of this outstanding aircraft. This year's proposed total buy of 84 aircraft will enable the Marine Corps to continue its transition towards 12 fighter squadrons on schedule.

Our other major modernization and transition effort, the AV-8B, accelerates during this year. The increase from 32 aircraft funded in fiscal year 1985 to 46 aircraft in fiscal year 1986 allows the Marine Corps to procure this aircraft at a more efficient production rate. On 30 January 1985, VMA-331, the first tactical AV-8B light attack squadron, completed transition at MCAS Cherry Point, North Carolina. Eleven AV-8B's have been delivered to the Marine Corps to date, and the aircraft is exceeding expectations in handling, reliability, and ordnance delivery accuracy. As you may recall, the AV-8B's performance doubles the range or payload of the AV-8A. The unique VSTOL characteristics allow the Harrier II to be operated from a variety of sites, including forward positions near to the ground forces it was designed to support. This forward and remote site capability allows exceptional deployment and employment flexibility, including a lack of dependence on complete, vulnerable air bases as well as a reduced reaction time for air support.

There remains, however, a pressing need for a two-seat trainer version of the Harrier II, the TAV-8B. The AV-8B is the only modern tactical jet aircraft in the United States that does not currently operate a two-seat trainer version. As we approach 1987, our introduction schedule calls for the conversion of A-4M light attack pilots to the VSTOL light attack AV-8B at a rate near 120 pilots per year. The TAV-8B is scheduled to enter the force in that time frame and to support the safe and efficient conversion of those pilots. Adequate funding is included in the proposed 1986 budget for the continued development and timely delivery of this aircraft. This is a high priority program, and we urge your support.

We continue in the 1986 budget with our efforts to improve our night fighting capability through night attack enhancements for the AV-8B and F/A-18. Last year Congressional support ensured the initiation of this low cost, highly effective capability with a strong program endorsement. The AV-8B will lead this initiative with the same systems following in the F/A-18. For the AV-8B, the night attack package includes a fixed FLIR, night vision goggle compatible cockpit lighting, heads down display, and a rasterized heads up display. The F/A-18 utilizes the FLIR capability in a pod configuration, with a rasterized heads up display, night vision goggle compatible lighting, and a digital map. One benefit of this program is that one research and development program supports both aircraft. At this time, negotiations with the British government are underway to cooperate on research and development costs which could further reduce developmental costs. This night enhancement effort will enable Marine aviation to effectively fight these two aircraft at night and under reduced visability.

The Marine Corps continues its support of efforts to upgrade the A-6E to the A-6F. The combination of planned improvements offers enhanced capability, survivability, and reliability for the A-6E. The upgrade includes the introduction of new engines, improved radar systems compatible with the planned advanced medium range air-to-air missile, updated electronic countermeasures for increased survivability, as well as engineered reliability improvements to reduce maintenance man-hours and mean time between failures. The durable A-6 has served the Marine Corps well as an all weather medium bomber, and the program requested this year will ensure continuity of this essential capability into the next century.

The CH-53E is one of the Department of the Navy's two multi-year aircraft procurement programs, approved in FY85. This multi-year procurement starts in 1986 and enables the Department of the Navy to realize a savings of $103 million over four years. The CH-53E, the most powerful helicopter in service in the free world, provides the Marine Corps with a solution to its heavy lift requirements to the year 2000 and beyond. The aerial refueling capability inherent in the CH-53E makes it self-deployable. In a recent demonstration, four CH-53E's flew non-stop from MCAS Yuma, Arizona, to MCAS New River, North Carolina. After three aerial refuelings and 14 hours elapsed flight time, all aircraft arrived at their destination, all fully mission capable. We now have two fully operational, 16-aircraft squadrons, one on each coast. Last November, our third CH-53E squadron, HMH-466, was formed in MAG-36, 3d Marine Aircraft Wing at MCAS Tustin, California.

For our medium lift requirement until the arrival of the MV-22A, a series of survivability, reliability, and maintainability (S,R,&M) modifications are planned to sustain the CH-46E medium helicopter force. The first two S,R,&M prototype aircraft have been modified with fleet deliveries expected to begin during FY86.

In the attack helicopter structure, a second year buy of 22 AH-1T+ aircraft is also included in this year's budget request in order that we may fill existing inventory shortfalls. The previous support of the Congress in FY84 and FY85 has been critical to the success of the AH-1T+, and your continued support for 1986 is requested. This versatile attack helicopter incorporates the T-700 engines which allow it to be operated in the extreme high/hot environments of the world. Additionally, the Hellfire missile, with its increased range and lethality, will be introduced with the AH-1T+. Concurrent with the procurement of the new aircraft, the existing AH-1T's will be retrofitted with both the T-700 engine and Hellfire. Test and evaluation of both enhancements have progressed without difficulty and have verified the performance benefit of these two initiatives.

Aviation ordnance developments and stocks are designed to ensure that precision weaponry in the proper quantities is available for employment in support of ground forces. The Laser Guided Maverick is specifically designed to fill a precision guided munitions requirement in the close air support role. This year's request continues procurement of this valuable munition. Additionally, for deep strike interdiction, the Imaging Infrared Maverick procurement begins with this year's submission. The I^2R Maverick provides the potent punch needed in deep enemy target areas. Finally, Hellfire procurement is included as an anti-armor precision guided munition designed for low speed delivery by helicopters. The increased standoff provided by all these lethal munitions provides greater platform survivability without degrading effectiveness. Procuring and maintaining adequate stocks of these weapons will be critical to success on the modern battlefield.

Efforts to modernize our command and control systems will come to fruition in FY86 with the initial procurement of four TYQ-23 air operations modules for our Tactical Air Operations Center (TAOC). The modular design of this system, the Tactical Air Operations Modules (TAOM), offers a unique ability to tailor the size and capability of this command and control system to the needs of the aviation force it supports. TAOM is urgently needed to replace the bulky, less effective and aging 20-year-old equipment utilized today.

As we enhance our capability to accurately and expeditiously identify air threats, our ability to defend against those threats continues to improve. As an example, the highly effective Hawk missile system has been equipped with an optical tracking capability to complement its formidable radar system. An expansion of our active and reserve Hawk battalions begins this year with the addition of a third firing section to each battery. This addition provides a 50 percent increase in simultaneous threat engagement capability per battalion. Similarly, our Forward Area Air Defense Batteries will continue to receive the handheld Stinger missile with its significant improvement in capability over the older Redeye missile system it replaces.

Modernization efforts are not restricted to weapon systems alone. If Marine aviation is to logistically sustain our warfighting capability over time, aviation support organizations and their equipment must be modernized at a pace equal to that of operating squadrons. The primary organization responsible for logistically supporting the Marine Air Wing is the Marine Wing Support Group (MWSG). This unit is organized and equipped to provide the full range of logistical support functions from Tactical Air Fuel Dispensing Systems to runway repair, and is an integral part of the air wing. We continue to review the MWSG organization with the intent towards making it more effective and efficient. In terms of equipment modernization, the M939 5-ton truck is replacing its 1960's predecessors; and, for the first time opportunity exists to fulfill inventory requirements.

Another aspect of force modernization is the Aviation Logistic Support Ship (TAVB). The TAVB provides a dedicated sealift vehicle for moving an aircraft Intermediate Maintenance Activity (IMA) to the objective area. The TAVB will transport mobile maintenance facilities for both fixed and rotary wing maintenance which can be displaced ashore as the situation permits. Additionally, the TAVB provides aircraft component sustainability which precludes the purchasing of a 30-day pack-up to support an MPS mix of aircraft.

Finally, essential military construction requirements tied directly to the standup of new aviation weapons platforms are being met in a timely manner. These facilities include housing for sophisticated cockpit trainers, aircraft hangars, and warehouses. All of these logistical and support improvements are designed to ensure that Marine aviation can train, deploy, and employ its assets in a timely and flexible manner while sustaining those forces over time.

The modernization of our active forces has also allowed Marine aviation to outfit Reserve forces with more capable aircraft, as well as the opportunity to achieve commonality in future years. As our light attack force is transitioned to the AV-8B, the A-4M, a highly capable conventional light attack aircraft, becomes available for Reserve modernization. The A-4M is equipped with a more powerful engine and contains the angle rate bombing system not in the presently assigned A-4E/F. Similarly, more AH-1J attack helicopters will become available for Reserve squadrons, thus allowing the shortfall in Reserve attack helicopters to be alleviated. Additionally, the Hellfire missile system introduced in the AH-1T+ will be retrofitted in the AH-1J. Again last year, Congressional action provided two additional KC-130T's for our existing Reserve KC-130 fleet, and offered the Marine Corps the opportunity to stand up a second Reserve KC-130 unit in the future. The three Reserve fighter squadrons will continue to receive the F-4S's freed up as F/A-18's are introduced to Active forces. Future plans include F/A-18 introduction to Reserve forces during the 1990's. Additionally, current plans are to introduce CH-53E's and MV-22A's into the Reserve force. Our long range goal is to reduce the number of aircraft models actually flown by Reserve squadrons, and provide as much commonality with the Active force as possible. This will substantially improve aircraft interoperability and maintainability.

The continued support of the Congress in the past has enabled Marine Corps aviation to modernize, bringing significant productivity and effective improvements to provide the requisite support for ground and logistics forces. In the past, innovative yet low risk, cost effective initiatives have been a trademark of Marine acquisitions. This was achieved by bold direction, prudent expenditure of scarce resources, and the never waivering support of Congress. Fiscal year 86 and beyond offers today's force the same challenge, and we stand committed to the same ideals. Your continued support is sincerely appreciated.

V-22 AIRCRAFT

Senator STEVENS. Gentlemen, I am going to have to interrupt you. I have a rules meeting. There is a fight over there and I have to be there. I do hope I can get back. I want to comment particularly on your V-22, the JVX.

As I told Senator Proxmire, this is the first aircraft procurement program that I have seen that I think has a real potential for civilian application if it is properly pursued.

I intend to do everything I can to get support for your R&D budget request increased. I want to urge you to pursue this with the concept that that R&D will bring down the unit cost of those aircraft. I think this will be a successful program for the Navy and it will have civilian application only if the unit cost of that aircraft is affordable.

If we are going to get into another aircraft that continues to escalate in cost after its initial procurement, I don't see, General, how you are going to succeed in getting the number of aircraft you need in the timeframe you are talking about because of the pressure that we have on the Defense budget during that period of time.

In my judgment, you should have the increase in the R&D and you should have every support you have now, but with the goal of trying to get that unit cost of that airplane down. It should not be something that is goldplated. It is the equivalent of a marine jeep, the way I see it.

It has to be that inexpensive before we are through, if the numbers are going to be there to do, as you suggested, to move substantial units in an aircraft with a capacity that small.

AIRCRAFT CAPACITY

What will be the total capacity of that aircraft in terms of men.

General SMITH. Twenty-four troops, combat loaded.

Senator STEVENS. What is the size of units you expect to be moved?

General SMITH. That is the equivalent of a reinforced rifle squad. By the time you configure a company which is the smallest organization we like to put in a zone, it averages out to give us about 240 people per company.

Senator STEVENS. Ten of these planes per company?

General SMITH. Yes, sir.

Senator STEVENS. You would have to have some spares along with that. You are going to need these in numbers and they are not an inexpensive airplane.

I think it has fantastic application to the civilian area because it would enable us to have commuter aircraft without building additional air strips. That in the long term can help get additional money back where it belongs into the future development.

I am worried about the GAO report, Mr. Secretary.

JVX COMPETITION

Incidentally, I didn't see any competition in the JVX. You mentioned competition in the JVX.

Mr. PAISLEY. Let me talk for a second about that. I have been involved in a lot of aircraft programs including commercial programs in my life. I came out of the Boeing Co.

This, in my opinion, is the best structured program that I have ever seen for an aircraft in the Government in my 30 years.

Senator STEVENS. Where is the competition?

Mr. PAISLEY. Competition, we have two contractors doing the development. They are going to separately compete with each other in production. We are going to have two production lines.

In fact, I don't think the Navy will ever build an airplane again unless they do that. We will do that under the ATA Program, too.

These two contractors will enter production with two complete data packages because they are doing the development together. The way to get the unit cost down is to have contractors competing every year in production.

Senator STEVENS. The way to keep the unit cost down is not to go into C, D, E, and F models before you get into your third year of procurement.

Mr. PAISLEY. I agree with you. I think modification of the airplanes is the worst thing you can do.

Fortunately, these two contractors understand the future capability of this airplane from a commercial viewpoint. It will never exist in the commercial marketplace unless it has all of the low cost capability that we need in the Marine Corps. You need it commercially if it is going to be expanded.

I agree with you, changes kill programs. We are dedicated on this program to keep the cost down because you need enough to do the job.

Senator STEVENS. I think that is why R&D dollars spent now will keep the unit cost down later. I urge you to keep in mind when this is going to be coming on stream we are going to be dealing with Stealth and a lot of things in this budget.

The budget will be straining at that time, as I see it, through 1988 and 1989 and you will not have any place for a bubble.

Mr. Paisley. As far as I know, Mr. Chairman, this is the lowest cost planned R&D program for new aircraft that the Government has ever had. I don't know of another one that has been lower than this.

F-14

Senator Stevens. I asked about this F-14 buy. You want 26 more F-14's, but you have 28 sitting in Norfolk that are in storage. You want $802 million to buy 18 more.

Why do you want 18 more if you can't use the 28 already purchased and sitting in storage?

Admiral Martin. Mr. Chairman, the aircraft in storage, and the production rates that have been planned out from an economical basis, will be used to man our carriers and our air wings in order to have 14 active and 2 reserve carrier air wings for 15-carrier battle groups.

Those that are in storage in Norfolk are being activated into the fleet as others come out for various reasons.

Senator Stevens. I have to tell you the same thing I did others. I think I speak for the rest of the committee. We don't want to sit here and try to figure out the highest priority for the Navy. We are facing now in all probability I would say not more than 1 or 2 percent real growth at the best with this battle that is going on.

You are looking at a budget sent us with a 7-plus percent real growth. ~~I think~~ you have to prioritize some of these things. As far as I am concerned, that is a priority.

If you have 28 in storage, you don't need 14 new ones as opposed to the money for development of the V-22. Someone is going to have to put priorities on these as far as where these cuts will be imposed. You are looking at a substantial cut.

The House just announced a $20 billion reduction in the budget. We obviously are not going to aim for that goal, I hope, but as a practical matter we have to have some guidance on this. I think you have to give us some reasons why you would want those.

LAMPS-III HELICOPTER

The Senate Armed Services Committee has decided you needed 6 more helicopters, the LAMPS-III helicopters, than the budget requests.

Did you ask the Senate Armed Services Committee to give you 6 more additional helicopters in addition to the request for—you have a request for 155 which CBO says is 10 more than you need.

Now the Senate Armed Services Committee has added 6 additional.

Admiral Martin. In response to your question, no, sir, we did not ask for 6 more.

Senator Stevens. Do you need them?

Admiral Martin. I would have to look at the total procurement plan. We need the aircraft and we can use them, but we are trying to keep our procurement plan balanced and affordable.

Like the F-14's, if we did not continue to procure the F-14's, we would find ourselves in a great hole in a few years.

Senator **Stevens**. You tell us you need them more than you need the F-14?

Admiral **Martin**. I don't think you can prioritize these——

Senator **Stevens**. I have to.

Admiral **Martin**. Prioritize which ones you need more or less.

Mr. **Paisley**. I think, Mr. Chairman, we didn't put them in the budget. We can always use more. I think we set the priority when we put the budget together. We said we needed the F-14's. We didn't put the H-60's in.

PRIORITIZATION OF NEEDED UNITS

Senator **Stevens**. Mr. Secretary and gentlemen, I think you have to look at the job you have to do. I appreciate you have a job to do. You have to tell us which of these two tools you need more than the others because we have just been told by our gang to reduce the amount of your money.

I think before we are through today, it may even be lower. It is not going to be possible for us to proceed with the budget as it was received. Unless you prioritize it, you are going to have some, what we used to call, ruptured ducks up here trying to decide what is best.

Our experience is 30 years ago; your experience is current. You have to tell us which one of these units you want more than the others. We will follow that if you do.

I think the committee agrees. Wouldn't you rather have the advice on priorities from the Navy rather than to sit here and try to decide where do we put the cuts?

We did that, I think, once before and it led to some problems. I hope that you will accord us the courtesy to respond to my specific request that you prioritize your budget request for major procurement.

I expect to have that before we mark up this budget. If we won't have it, we will accept no appeals.

Senator **Andrews**. The Chairman speaks for all of us because, quite frankly, when you are looking at a budget, you are expert on prioritizing. If you don't do it, who can? That is the problem we are facing.

Senator **Proxmire**. I concur with what the chairman has said. If you don't give us priorities, you will get a lot worse prioritizing out of us.

Admiral **Martin**. On that specific issue, the F-14's or the extra SH-60's. I would opt for the F-14. If you ask us for prioritization, that is prioritization.

MODIFICATION COSTS OF EC-130

Senator **Rudman**. I want to just go over a couple of areas that might be helpful here. We are going to talk about the E-6, TACAMO replacement, or whatever, at another hearing. The whole history makes it very difficult for this subcommittee to try to, if we have to do any prioritizing of our own, come to a conclusion.

I have a brief history. Let me go over it and show you what I am talking about. It is typical of some problems we deal with. We are to blame in the Congress for some of the confusion in procurement. Here is an example I don't think can be laid at our feet.

The fiscal year 1983 initiated program in April, there was a development contract with Boeing, the estimate was going to be $2 billion for 15 of them. In August 1983 you eliminated $421 million of funds as part of the fiscal year 1985 budget hearing.

From December to April 1984 the Defense Nuclear Agency briefed DOD and said that these were very necessary. In February 1984 Secretary Weinberger said that due to high cost of the E-6, you might be now modifying the EC-130.

In April 1984 Secretary Lehman said it ought to be canceled. Then in April 1984 the House Committee recommended termination.

Now, in May 1984 the Secretary comes forward and revises it and says it is going to be canceled and the EC-130's will assure communications with Trident. In May 1984 DOD reversed the policy and supported the E-6A.

Then this year it seems the Chief or the Secretary is saying something somewhat different.

Then the frosting on the cake, on April 30, 1985, which was a couple days ago, in a letter from the Secretary of Defense to the chairman of the House Armed Services Committee he says that—well, it is a typical letter from the Secretary of Defense, it is hardly understated—he says we must have proper command and control for our strategic forces or their deterrent value is diminished, et cetera, et cetera, et cetera.

There is strong backing to go full blast with the E-6A. I must say by the merest of coincidences this letter came not too long after the MX vote in the House.

I guess my question is: Who is on first? What do you want us to do?

Mr. PAISLEY. You know, you have probably summarized it accurately. I couldn't tell you whether it was or wasn't, but I can believe it. I think it is not too often that we have a case where we have two solutions for a problem where they do not solve the problem to the same degree.

We usually find ourselves debating whether we should or should not have a program. I think that we are fortunate that there is an option that is available that would do this mission to some degree, if not totally satisfactorily.

The Secretary of the Navy has taken a position that he is going to support the budget as it was put together. I think that if there is a reduction in the budget, one is going to have to look seriously at this program.

It is fortunate that we have two options. However, I should point out I have only taken a limited look at this because it was a production option for somebody else who was working in this area.

Costs do not look that much different to me. They may be spread over the budget differently. There is definitely a difference in the peformance of the two systems. There is no doubt in my mind we are talking about an element of the most importance, at least one of the most important legs of the Triad.

I don't treat this thing lightly. I think there is a very hard requirement. I am just saying that we are fortunate that there is another solution. I don't think it is totally satisfactory. It is almost that simple.

IMPORTANCE OF TRIAD

Senator **RUDMAN**. I would hope, echoing the chairman, that you give us some really good advice on this. We are going to have a closed hearing on this because there are some serious questions involved in the whole issue.

The fact of the matter is that anyone who has flown the EC-130, and I have, would have to come to the conclusion—I thought I was flying in one of the flying fortresses they had taken out of the Smithsonian that had 100 missions over Schweinfurt. It vibrated, had oil leaks, the crew had very improper accommodations, equipment was not well housed.

I don't care how much you do away with electronic suites, you don't change that airplane very much. I agree with you, it is an important mission with all the money we spend on the Triad.

How much faith do you put in that leg of the Triad?

Some people put more faith in that leg of the Triad than any other. The fact of the matter is that you can't talk to them and talk to them reliably.

Mr. **PAISLEY**. I tell you what I think we need to do. We need to brief you in detail on the performance and survivability of both aircraft. We need to do that in closed session. We will come and do that when you say to do it.

I will point out one thing. That some of the relics of World War II are not doing too badly because I am one of them.

HARM MISSILE

Senator **RUDMAN**. Let me turn to a program that you may wish to discuss or you may not wish to discuss today. I think it is proper in this hearing. I want to talk about the Harm missile for a moment.

So you want to talk about that today or talk about it at another hearing?

Mr. **PAISLEY**. I will gladly talk to you today.

Senator **RUDMAN**. A half billion dollars a copy. The total program cost is close to $7 billion. I won't go into the test results because some of them may be classified, but they are less than encouraging from the latest ones I have seen.

They have very serious questions as to the launch platform and how you are going to have to launch. Yet you are asking for a quarter of a billion dollars to procure 904 of them.

I am just wondering how confident are you in the various fixes in software and hardware to make this thing work better than it has worked in the test?

Mr. **PAISLEY**. Let me have Dick Rumpf talk about this because he has been intimately involved and he ought to be able to give you all the answers in the record here.

Mr. **RUMPF**. Let me try to give you some of the details.

Recently in our testimony to the House Armed Services Committee we reviewed with them the test results that were raised as an issue. I can provide those to you or to your staff. I will be happy to do that. They are classified information, so I won't discuss the details.

Senator **Rudman**. I would like them supplied in detail not only to me, but any other member of the committee who wants it, and to the committee itself.

Mr. **Rumpf**. We will be happy to do it, sir.

What is happening at the present moment with the Harm system which gives us great confidence overall, first of all, is understanding that those tests that took place recently are critically important to understanding the capability of the Harm system.

There is nothing available in the inventory anywhere in the free world or for that matter behind the Iron Curtain that has the current capability the Harm has which is in production today. It far surpasses that of Shrike and the standard arm weapons systems which both the Air Force and we in the Navy possess.

It is a revolutionary departure from the way of doing business with old weapons systems development, that is the Harm was designed with software flexibility to be adaptable as the threat changes. This is the issue that has raised the biggest amount of concern with certain people, specificially in other committees.

The rationale for the decision to go that way was to have the flexibility inherent in the system so that you do not have to virtually lift the nameplate and change the missile every time the threat changes which is what happens with the Shrike.

As you know, there are certain heads for Shrike that cover certain frequency bands. The Navy has a limited inventory capability onboard carriers to carry Shrike heads. That is the rationale for the Harm type of missile.

The system is right now going through a new software change. It is being tested, both in development testing and operational testing. We believe that the fiscal year 1986 software change which is now in test will satisfy those issues and correct those deficiencies which were cited in the last series of eight firings.

LIVE FIRINGS

Senator **Rudman**. How many live firings will there be other than simulated and other computer-assisted firings? How many actual firings against targets will there be?

Mr. **Rumpf**. We will have in this next sequence that started on the 15th of this month and will run through July 1, six live firings and hundreds of captive carry hours of capability.

We will be evaluating that against all of the hardest threats that we had cited in the previous test issues.

Senator **Rudman**. When will that be done?

Mr. **Rumpf**. We will have test results on that software in July. We will be happy to provide those results to you.

Senator **Rudman**. The committee would very much like to see them, both sets of tests, both live firings and other firings.

Mr. **Rumpf**. Right.

Senator RUDMAN. I think I will ask one question and then yield to Senator Proxmire.

Admiral BUSEY. May I add something there?

Senator RUDMAN. The next question is for you anyway, Admiral, so that is fine.

FIRM FIXED PRICES

Admiral BUSEY. You mentioned in your opening question that we are paying a half million dollars a copy for that missile. I wanted to give you confidence we are still working with the contractor on firm fixed prices. We have recently finished our negotiations for the 1985 buy.

That missiles cost will be $283,000, which is a 27-percent reduction over the previous year's unit cost. So, we are continuing to bring the contractor down in unit pricing.

Senator RUDMAN [presiding]. I will try to hold to a 10-minute rule here.

Admiral, I have been interested in the whole ECM question for a variety of reasons for some time. I am aware of, I would have to say the most scathing letter you wrote to the contractor, ASPJ, in which you complained rather vociferously. I liked your style. It was a very nice letter regarding cost overruns, scheduling problems, slippages, performance, all sorts of things.

I am sure the contractor responded with alacrity to that letter because that letter would have to get that kind of response. There are some in the industry who are very, very concerned about that development program and some in the Navy who believe there is a real possibility that the cost growth possibilities in ASPJ are enormous.

But even more important if it does not do what it is supposed to do at the right time, the Navy is left in a terrible position in terms of ECM, just the reverse from what the Air Force and Navy found in Vietnam.

The Navy had an operational ECM. The Air Force bet on the wrong horse and the amount of retrofitting that had to be done at that time to Air Force equipment was enormous and costly and we lost a number of planes and lives because of it.

At what point do you make judgment that ASPJ will be delivered within a reasonable time frame, perform as it is supposed to perform and at a cost that you can afford?

Admiral BUSEY. That is a difficult question to answer, sir. The letter that I sent to the joint venture team that you are referring to did receive the response that one might anticipate.

General McMullin, my counterpart in the Air Force, continues to work on this problem on a joint basis with the joint venture team.

As I am sure you are aware, we have eight of the pre-production models in service or available to us right now for testing. As we continue to monitor the program, we are continuing to push the joint venture team.

We have capped the contract, so the cost to the taxpayers will not go beyond present levels, that is fixed in full-scale development.

Senator RUDMAN. And production?

Admiral BUSEY. No. This is development.

Senator RUDMAN. Development strictly?

Admiral BUSEY. Development strictly.

Senator RUDMAN. That is an important distinction.

Admiral BUSEY. As we move toward production, we will not make a decision to go into production until we are satisifed that the system will provide the expected performance that both we and the Air Force are looking for.

I might add that we do have an alternative, at least in the Navy. Unfortunately, the Air Force does not. We have the ALQ-126B which is in service now, however, it is not nearly as capable in total performance.

I am confident that we are going to be able to get this team. It is another competitive pressure that Mr. Paisley previously mentioned. Our aim as we go into production on this system is to break that joint venture apart and they will compete with one another for production and thereby enable us to keep the cost down.

F-111 ALTERNATIVE

Senator RUDMAN. Of course, the Air Force does have an alternative, the F-111.

Admiral BUSEY. Yes, sir, but not for tactical air.

Senator RUDMAN. I want to leave you with this thought.

I have had people within the industry who have no direct interest in the outcome of this, but who understand the technical assumptions and state of the art breakthroughs that were essentially assumed by these contractors, very ambitiously. Hopefully they can fill them in their original proposal in how they meet the threat.

DIVAD

I have had people say this could turn out to be the Navy's Divad. By that they meant cost too much, doesn't do the job, and it just is going to end up to be a nightmare.

Certainly nobody wants to see that. That is why I ask you at what point do you decide that maybe it will do what it is supposed to do?

There are people in the industry who think it won't meet those specs. I hope they are wrong, but they are fairly knowledgeable people.

When I mentioned Divad, Secretary Paisley grabbed for the microphone.

Mr. PAISLEY. We can't stand one of those. We will get this into fixed-price option as soon as we get it into production. We will get the price pinned down.

The second point, the biggest problem in my mind on the program is not the specific performance specifications in terms of how it will function. Rather, the biggest problem with it is that we put an awful lot of equipment in a small square. It is heat dissipation reliability.

I think it is not a problem of its working. I think the problem is it continuing to work. We cannot put this kind of system in the field that will not work.

Senator RUDMAN. What you are asking this contractor to do is an enormous task electronically and in terms of heat dissipation.

The thing works beautifully the first 1½ hours of flight. If it does not work after that, you have a problem.

I would like to be informed, Admiral Busey, on the progress of that program because I think the whole ECM Program has been neglected in some ways by the Services. Probably not by the Navy, but it is vital that we protect this very costly aircraft and the pilot.

Senator Proxmire.

Senator PROXMIRE. Secretary Paisley, I have some questions for you.

Before I do that, I would like to say to General Smith, your whole background and your whole career started at least in the State of Washington, your wife is from Washington. I see the two children you have in college are both at the University of Wisconsin at Madison. So, you and your family are people of very, very good judgment. [Laughter.]

There is another good indication of your good judgment. You were born on November 11, 1926, precisely 13 years after I was born. So, we are practically twins.

General SMITH. I am sorry to report I did not have much influence on that last event.

Senator PROXMIRE. Well, your parents had good judgment.

Secretary Paisley, pending on the floor right now, as you know, is an amendment by Secretary Grassley that would hold defense spending to zero real growth.

If the Secretary should apply zero real growth to Navy aircraft procurement RDT&E, what would be the consequence for the procurement program and for your research program?

RESEARCH

Mr. PAISLEY. Let me talk briefly about research. I have continually, since I have been in the Government, tried to get more out of our research dollar by cutting down the number of programs and putting more of the money into a smaller number of them.

The edge that the Soviets have on us in numbers has to be combatted by having more capability, reliable capability. So, I have struggled to continually protect our R&D program in spite of everything and we always wind up in the end cutting some of them.

If the budget is cut, the Secretary in the R&D area will hand me a problem of reducing the programs. He will say, here is exactly what I want you to do, here are your guidelines and policy.

Then I have to go in and look where can I cut programs where the payoff is the lowest or the risk is the highest. That is what I will do.

Now, in regard to the specific procurement of the aircraft buy, I want to have Admiral Martin talk to this for a second. It is not an easy question to answer, I know.

Senator PROXMIRE. Admiral Martin.

APN PROFILE

Admiral MARTIN. Yes, sir, Senator Proxmire. When the APN profile is planned, it is planned to meet specific known requirements. We are below the required procurement on those profiles.

If you reduce, for example, one type of aircraft to a point where it is no longer economically feasible to buy it in order to buy more of another, you are hurting yourself in the out years. That is one reason we have tried to balance the APN Program with reasonable numbers relative to economical production rates and requirements.

We are bare bones right now in naval aviation. For example, we are looking at all available initiatives to ensure that we will be able to deploy safely the necessary and prudent forces around the world as determined by the National Command Authority.

Senator **Proxmire**. Can you give me a specific figure?

If you had to opt on a zero growth basis, real growth basis, in 1986, how much would you have to take out of research and development and procurement?

Admiral **Martin**. I can't answer that question for you without an in-depth study on procurement research and development.

Mr. **Paisley**. In research and development in the Navy, it would have to be about $1 billion in the R&D account.

Senator **Proxmire**. You would lose $1 billion in research?

Mr. **Paisley**. Yes.

Admiral **Martin**. We will drag that number out and put it in the record.

Mr. **Paisley**. We will drag it out in a minute and give it to you.

D-5 TRIDENT II

Senator **Proxmire**. You mentioned in your prepared remarks the D-5 Trident II missile in your testimony indicating that the program is moving along smoothly.

Is the accuracy of the D-5 comparable to the MX?

Mr. **Paisley**. I can't give you the answer in this session. I will give it to you for the record.

Senator **Proxmire**. I am not asking you to give me any figures that are classified.

Is it comparable?

Mr. **Paisley**. I don't know what it is for the MX. I know what it is for the Trident.

Senator **Proxmire**. Give us that information for the record.

Mr. **Paisley**. Yes, sir, absolutely.

[The information follows:]

Trident II D-5 Accuracy

At comparable SLBM range, the CEP of MX land-launched missile is [deleted] that of the anticipated figure for the D-5 SLBM sea-launched missile.

D-5 HARD TARGET

Senator **Proxmire**. Is the D-5 hard target capable against current and anticipated Soviet silos?

Mr. **Paisley**. I am going to have a problem answering that question here. I know the answer. I will give it to you for the record.

[The information follows:]

Trident II D-5 Hard Target Kill Capability

Yes, the 5-D FBM Weapon System is being designed to be effective against the full spectrum of Soviet targets, [deleted] which we believe are hardened to withstand a maximum of [deleted]. An individual [deleted] MK 5 warhead deployed on the D-5 missile will have approximately a [deleted] probability of destroying these targets (assuming a [deleted] weapon system reliability). [Deleted.]

While Soviet efforts to further harden strategic targets cannot be predicted for the entire service life of the D-5, it is estimated that the D-5 will remain effective against the full range of Soviet targets.

MINUTEMEN SILOS

Senator **Proxmire**. Can the D-5 fit into MINUTEMAN silos?

Mr. **Paisley**. I am not sure. I would say no. I am very familiar with the MINUTEMAN silo. I don't think it will. I will give you that for the record, too.

[The information follows:]

Trident II D-5 Missile

The D-5 missile will physically fit into the MINUTEMEN III silo. Extensive modifications would be required to launch the D-5 missile from a MINUTEMAN III silo and some missile modifications would be required to make the missile compatible with the Air Force ground launch systems.

TRIDENT/POSEIDON COMPARISON

Senator **Proxmire**. Then the last question is how much more survivable is the TRIDENT submarine compared to the POSEIDON?

Mr. **Paisley**. I will have to give you that for the record.

[The information follows:]

Trident Submarine Survivability

Survivability is a difficult concept to measure in quantitiative terms, particularly when weighing two extremely survivable systems such as the POSEIDON and TRIDENT submarines. The POSEIDON submarine is considered completely survivable, and the TRIDENT Class is an improvement over the POSEIDON Class. Factors leading to this assessment are:

The TRIDENT is significantly quieter than the POSEIDON submarine at the same speeds. In anti-submarine warfare technology, this alone is a tremendous improvement.

The TRIDENT has improved sonar processing equipment over the POSEIDON. This gives the TRIDENT a significantly greater acoustic advantage over a typical Soviet nuclear attack submarine.

The increased ranges of the C-4 and D-5 missiles over the POSEIDON (C-3) allow Trident patrol areas to be approximately [deleted] greatly aggravating the Soviet ASW search problem.

The TRIDENT is [deleted] faster, more maneuverable and has a more capable conventional torpedo fire control system than the POSEIDON submarine.

Enhancing the survivability of our strategic submarines through every available means is an ongoing effort of the SSBN Security Program for both the POSEIDON and TRIDENT submarines.

MINE COUNTERMEASURES SYSTEM

Senator **Proxmire**. You indicated the Navy is making excellent progress in developing a mine countermeasures system.

In your opinion, given recent mine-laying in the Red Sea and potential for military powers to lay mines, how important is it to have ocean-going surface and air countermine capability?

Admiral **Martin**. If you were to count the total numbers of mines available in the Warsaw Pact countries, it would be staggering. Now, we have seen a proliferation of these mines into Third World countries and the willingness to use these mines.

I think we have fallen down in our capability to counter the mine threat, but this is realized now and we are going to do something about it. We are looking at procuring the MH-53E version of the CH-53 and modernizing our mining countermeasures.

You don't want to put all your eggs in one basket in this situation. You need a very good airborne mine countermeasures capability as well as you need a surface capability. Airborne countermeasures capability will have to be flown into such places, such as we did most successfully in the Red Sea and then embark it on a ship already over there.

We transported those airplanes in a C-5. We are examining all means to enhance our mine countermeasures and for offensive mining from airborne platforms.

Senator **Proxmire**. That is reassuring to hear because we rely so heavily on our naval arms. It is one area of clear superiority we have. As you proint out, so many nations do have the capability of mining harbors. It is something we should be able to handle.

VH-1 HELICOPTER

Mr. Secretary, for fiscal year 1986 you requested nine SH-60 helicopters at a cost of $153 million. There are nine helicopters to replace the VH-1's the President currently uses.

What is wrong with the VH-1 helicopter? Why do they have to be replaced and why can't we get more life out of the present helicopters?

Mr. **Paisley**. We have a little problem on this, Senator, from a classification viewpoint. I can discuss part of it if you want a half answer.

Senator **Proxmire**. Whatever you can tell us about that.

General **Smith**. The VH-1's that are currently in operation have exceeded the gross weight capability of the aircraft for the mission. That is as far as I can go on that in open session.

In addition, they are approaching, underline the word approaching, the end of their service life. Now, the VH-60's that we are buying give us a growth capability in three dimensions, weight, range and survivability. We feel, in the Department of the Navy, it is a good move for the survivability of the National Command Authority.

COMPETITIVELY AWARDED PROJECTS

Senator **Proxmire**. You indicated, Mr. Secretary, the number of competitively awarded programs has grown from 25 to 37 percent since 1981.

What is your long-term objective for competitively awarded contracts and while it is good to see progress, it seems to me that progress is not enough. Thirty-severn percent is still far less than half of your procurement.

Why can't we do better?

Mr. **Paisley**. You know something, Senator? I would like to make it 100 percent. I want you to know my attitude about this issue.

I think the goal was stated, I think I heard the Secretary say it last week that he wants it over 50 percent. It sounds like a simple problem. We have made tremendous strides in this area.

As you know, most of the ship programs are competitive. We are not structuring programs any more where they are not going to be competitive. Our problem is that we are living with some programs that are very difficult to get into a competitive mode.

I think the Secretary's stated position is that we are going to get over 50 percent. He is the driver in that area, to tell you the truth. He is trying hard.

The Secretary of the Navy has done more in this regard than anybody else in the Government, in the Department of Defense, I should say, today.

Senator **Proxmire**. That is right. I respect Secretary Lehman in this regard. I think he has done a good job. We have to do a lot better. Thirty-seven percent is better. When you tell that to people in the private sector, they can't believe that we can't get 50 percent.

I know it is hard in shipbuilding because you do have aircraft carriers and submarines, and so forth, with very few firms that are capable of producing them.

Mr. **Paisley**. Senator, we have entered into some bad competitive situations. I will just take an example. The F-18, there is no way the F-18 should have been competed the way it is. We should have started that program and had two contractors from the start like we are doing on the JVX.

We would right now have that program every year competed. There is no reason with the size of that buy to have the thing structured as it was originally. You live with that problem once you get yourself bedded down with tooling and everything else with no data package. We are not going to do that any more.

We are going from now on out move in that direction.

Senator **Proxmire**. Thank you, Mr. Secretary.

My time has expired. I have some more questions for the record.

Senator **Rudman**. They may be submitted for the record. Senator Nunn also has some questions for the record.

Senator D'Amato.

A-6

Senator **D'Amato**. Thank you very much, Mr. Chairman.

Admiral, the A-6 fills many of the Navy's requirements as you have indicated in your prior testimony, essentially the fleet strike capability.

Do you intend to introduce the A-6 into the Reserve and when would the Navy like to do this if it does?

Admiral **Martin**. Senator D'Amato, we very much want to introduce the A-6 into the Reserves. We intend to do it as soon as we can get appropriate profile to do it, considering the wing problem, et cetera.

If I may elaborate just a little. I am of the school that believes that the Reserves should be flying essentially the same aircraft that the Active Forces are whenever possible in order that they can perform their mission in time of war as they were intended to do so; that is to move right in and replace the Active Force attrits or move aboard ship and reduce the amount of supportability.

The supporting of different types of aircraft in the Reserves or out of the Reserves is a problem. We presently today have Reserves as augmentation units in the replacement air wings flying fleet asset A-6's. Practically speaking, they are flying the A-6's in the Reserves now.

F/A-18

Senator D'AMATO. It has been suggested that additional F/A-18 aircraft can be purchased to fulfull the mission of the A-6E.

Would you comment on that?

Admiral MARTIN. Yes, sir. I have addressed that in previous testimony. They have entirely different missions and a requirement exits for both of those aircraft.

To repeat, the A-6E is a very modern airplane in an airframe which is old. The airframe is not the real performer in this case, it is the equipment in the airframe. The A-6E is the only long-range deep interdiction, truly all-weather, large load carrying capable aircraft in production in the free world today.

The F/A-18 is essentially a clear air mass strike fighter. We do hope to make an austere all-weather version out of the F/A-18, but you will never make F/A-18 carry the bomb load that the A-6 can.

As I say, my background is light attack and the A-6 is one airplane I am pushing very hard for because we need to pursue a more highly technical capability to strike an enemy with the modernized and highly capable defenses that we see our adversaries developing.

Senator D'AMATO. Mr. Chairman, as you have indicated, I have a number of questions I would like to submit for the record and also a statement.

Let me thank you, Admiral, for answering those.

SUBMITTED QUESTIONS

Senator RUDMAN. Gentlemen, I believe that we have run out of questioners. There are a number of very important matters we have discussed today that we have asked for complete answers for the record. We would certainly appreciate your getting them to us.

We will have a closed hearing, as the Chairman indicated, on TACAMO at which time we will discuss our concerns.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

Additional Committee Questions

CARRIER AIRCRAFT MIX

QUESTION: Have procurement objectives for the F-14s, F/A-18s and A-6s been calculated under the flexible carrier aircraft mix?

ANSWER: F-14, F/A-18, and A-6 procurement objectives have been calculated for a time-phased achievement of Notional, MIDWAY and KENNEDY-type wings. These planning objectives account for projected attrition, anticipated retirements, and the expected replacement schedule for each aircraft type. Procurement objectives will vary over time according to changes in actual versus projected mishap rates and actual usage data on individual airframes. Planned replacement aircraft, such as the Advanced Tactical Aircraft, impact procurement. Introduction to full force replacement with new aircraft historically takes ten to fifteen years. Slippage in introduction rates or lower annual procurement rates will impact procurement objectives for each type aircraft being replaced. Considering these factors, procurement objectives for the F-14, F/A-18, A-6 and all naval aircraft are reevaluated annually. Additionally, we continue to review our air wing structure to ensure the optimum mix of aircraft. KENNEDY and F/A-18 equipped wings are under operational evaluation now and the notional wing will be evaluated when the first is embarked. These comparisons and our continuing review of air wing structure are also factors in our annual procurement objective evaluations.

QUESTION: Will the flexible carrier aircraft mix approach change the total number of F-14s required or the F-14 delivery requirements?

ANSWER: The transition from today's air wing mixes to the Notional, MIDWAY and KENNEDY wings is a time-phased evolution that reflects past and present budget realities as well as projected procurements. The new mix of aircraft in each wing is a function of aircraft tactical interdependence. Reduction of our daily inventory requirements for operating F-14 aircraft is closely tied to inventory increases in the EA-6B and E-2C. Inventory requirements for the F-14 decrease slightly as our inventory increases in these other two aircraft. Current planning considers the replacement of CORAL SEA with an F-14 capable ship and the full integration of the F-14 into our Naval Reserve. Our current air wing transition schedule has allowed us to place these F-14s into the Naval Reserve much earlier than previously envisioned. We annually review our requirements for all aircraft based on force structure, attrition, retirements, and anticipated system developments.

QUESTION: Will the flexible carrier aircraft mix approach change the total number of F/A-18s required or the F/A-18 delivery requirements?

ANSWER: As with the F-14, the F/A-18 inventory requirement is updated annually. The planned notional air wing does slightly reduce the rate at which F/A-18s are required. The F/A-18, however, is replacing several types of aircraft in the U.S. Navy and U.S. Marine Corps active and reserve forces. Additional mission areas are being evaluated for the aircraft. We envision the F/A-18 in our active inventory for a very long time. The

F/A-18 procurement objective is reviewed annually with these factors and the variances of attrition, retirements, replacement system, and force structure in mind. Projected total procurement of the F/A-18 has remained approximately constant.

QUESTION: Will the flexible carrier aircraft mix approach change the total number of A-6s required or the A-6 delivery requirements?

ANSWER: The A-6 is similarly affected by the factors I have discussed concerning the F-14 and F/A-18. The A-6 aircraft has been in our inventory longer than these two aircraft and will continue to be in operation into the first part of the next century. We are pursuing a major system upgrade of the aircraft to ensure its warfighting capability over its life cycle. Our analysis of air wing requirements indicated a strong need for A-6 type capabilities in increased numbers. A-6 inventory requirements have increased. This inventory requirement will pace the evolution of the strike portion of our carrier air wings. Our plans, including active and reserve forces, are adjusted annually as they are affected by the previously mentioned constraints.

QUESTION: What cost/mission analysis has been done to determine the optimal carrier aircraft mix?

ANSWER: The recently completed carrier air wing composition study addressed the entire spectrum of warfighting capability embarked on our carrier decks at sea. Mission areas were studied independently to ensure that essential tasks were accomplished and that discretionary warfighting capability was maximized. The study assembled its derived "notional" air wing and analyzed it across a range of operational scenarios that encompassed all known and envisioned naval warfare tasks. Operational commanders' inputs were adapted and tested leading to a final mix of aircraft that provides the maximum in warfighting potential. Several air wing mixes are at sea and under operational evaluation today. The mix of aircraft in an air wing is not static. Improvements in individual aircraft capabilities, evolution of new threats, and technological advances may require further changes and refinements. We will continue to analyze our air wings to ensure the most capable warfighting mix of aircraft remains embarked on our carriers. Internal cost analysis indicated there would be no substantial cost differences in pursuing any of our alternative Carrier Air Wing force mix options as compared to the mix we have today.

AIRCRAFT IN STORAGE

In the fiscal year 1986 APN budget, the Navy has requested $802 million for 18 new F-14A aircraft and $214 million for 6 new A-6E aircraft. Sitting in storage are 28 F-14As at Norfolk and North Island and 16 A-6Es at Norfolk.

QUESTION: Why is the Navy purchasing new aircraft when it has these in storage?

ANSWER: The 18 F-14A and 6 A-6E aircraft in the FY-86 budget are needed to support 14 USN, 2 USNR, and 3 USMC air wings in FY-88. The stored F-14As and A-6Es are awaiting rework and other modifications prior to assignment to active and reserve squadrons.

QUESTION: Specifically, how and when does the Navy plan to use these stored aircraft?

ANSWER: The aircraft will be reworked prior to fleet assignment starting in 1985. Some of the F-14As are programmed for the Naval Air Reserve squadron transitions in FY-87.

QUESTION: What other types of aircraft are in storage and where?

ANSWER: Various fighter, attack, and support aircraft are in temporary storage at several Navy and commercial rework facilities. We also have fighter and support aircraft in mobilization reserve storage at the Military Aircraft Storage and Disposition Center (MASDC).

QUESTION: What is the cost of storing both the F-14s and A-6s mentioned above, and any other aircraft in storage?

ANSWER: Average storage cost for the F-14/A-6 is a one-time charge of approximately $26 thousand for preservation and $21 thousand per aircraft annually thereafter for upkeep. The mobilization aircraft cost approximately five hundred dollars annually per aircraft for upkeep.

SPARE ENGINE REQUIREMENTS

In 1978 the Navy implemented the engine analytical maintenance program (EAMP). This program's intent is to decrease depot level engine repair by increasing the amount of maintenance accomplished at the intermediate level. Stock funding of aviation depot level reparables (AVDLR's) began in April 1985. An impact of stock funding will be that repairs will be made at the lowest possible maintenance level. These measures should reduce the "turn-around" time necessary to repair engines, and consequently reduce the number of spare engines needed throughout the maintenance pipeline. Savings should be available, therefore, by re-evaluating spare engine requirements on current production aircraft.

QUESTION: Have spares requirements been recalculated to reflect benefits of the Engine Analytical Maintenance Program and stock funding?

ANSWER: Existing spare aircraft engine requirements and future identified requirements are calculated utilizing, inter alia, benefits of the Engine Analytical Maintenance Program (EAMP) I Level/depot repair splits. Recalculating spares requirements by forecasting benefits of Navy Stock Funding of AVDLR's will not be practical until data on turn-around time repair benefits are available. Estimate sufficient data 2-3 years after initiation of AVDLR's Navy Stock Funding.

QUESTION: Have there been any savings with the change to the Engine Analytical Maintenance program and stock funding?

ANSWER: Cost savings have not been realized from the EAMP. However, there probably have been cost avoidances; which are undetermined. Actual cost avoidances cannot be tracked as each budget submittal from NAVAIRHQ for engine spares procurements/ engine depot repairs reflects benefits from the EAMP. Considering that Navy Stock Funding of AVDLR's was not implemented until 1 April 85, it is not currently possible to reflect cost avoidances from that program.

QUESTION: If there have been (are) savings, what was (will be) the disposition of those savings?

ANSWER: As stated above, the EAMP has been (and is) reflected in the NAVAIRHQ spare engine requirements determination. However, programmed standard I Level repair turn-around times (TAT's) are utilized in the formula for spares requirements. In actuality, most engine communities have never realized standard TAT's due to material (mainly components) shortages resulting from years of underfunding depot component repairs. If/when Navy Stock Funding of AVDLR's is successful, the program should allow each engine community to initially achieve its programmed I Level repair standard TAT. Reduction(s) in standard TAT's when/if realized, would then require recalculation of spares requirements for out years for each benefited engine community; such action via forecasted vice actual TAT benefits would be extremely risky as negative peacetime/wartime readiness impacts could occur.

AV-8B SPARE ENGINES

In fiscal year 1984, the Navy requested 7 spare engines for the AV-8B. In fiscal year 1985, the Navy requested 12 spare engines. For fiscal year 1986, the Navy has increased the quantity of spare engines requested to 22.

QUESTION: Why has the quantity of AV-8B spare engines requested been steadily increasing?

ANSWER: Both the AV-8B procurement quantities and total operating aircraft in the FY 84 to FY 86 time period and the deployable portion of the operating aircraft are steadily increasing. The following table depicts the AV-8B aircraft program growth:

FY	A/C Buy	Operating Aircraft	Deployable Aircraft	Spare Engine Requirement
84	27	62	44	7
85	32	88	60	12
86	46	126	95	22

QUESTION: On what basis were the AV-8B engine requirements calculated?

ANSWER: Spare engine requirements are computed in accordance with DOD instruction 4230.4. The computation takes into consideration aircraft flying hours, engine removal rates, repair turn around times and special mission requirements.

QUESTION: Is there a set ratio of spare engines required to AV-8B aircraft?

ANSWER: There is no set ratio of spare engines in the determination of spares requirements for any aircraft. The spare engine requirements determination computation methodology is summarized in the answer to question #2.

CH/MH-53E HELICOPTER AIRFRAME PROCUREMENT

Multiyear procurement of the CH/MH-53E airframe has been approved for fiscal years 1986 through 1989. In the February 1984 APN budget submission, total anticipated savings of this multiyear procurement were given as $129.3 million. The February 1985 APN budget submission lists total anticipated savings due to multiyear procurement as $102.9 million.

In the February 1984 APN budget submission, estimated unit costs for the CH-53E were $11.7 million for fiscal years 1985 and 1986. The February 1985 APN budget submission estimates CH-53E unit costs as $10.9 and $10.4 million, respectively, for fiscal years 1985 and 1986. In the February 1984 submission, estimated unit costs for the MH-53E were $14.6 and $13.2 million, respectively, for fiscal years 1985 and 1986.

QUESTION: Why did the anticipated savings due to multiyear procurement of the CH/MH-53E airframe decline between the February 1984 and 1985 budget submissions?

ANSWER: The February 1985 submit reflects re-estimating of both annual and MYP costs based on negotiation experience for the FY 1984 annual airframe contract; projected total costs for both annual and multi-year scenarios were lowered, decreasing the total savings. The projected per cent savings of MYP over annual remains at 14%, however.

QUESTION: Why was the February 1984 estimate for the CH-53E unit cost so high compared to the February 1985 estimate?

ANSWER: The February 1984 estimate was based on the FY 1983 definitized contract price. The February 1985 submit reflects re-estimating based on the FY 1984 definitized contract price, which came in lower than anticipated.

QUESTION: Why was the February 1984 estimate for the MH-53E unit cost so high compared to the February 1985 estimate?

ANSWER: The February 1984 estimate was based on the FY 1983 definitized CH-53E contract price adjusted for MH configuration costs. The February 1985 submit reflects re-estimating based on the FY 1984 definitized CH-53E contract price, which came in lower than anticipated.

INFLATION RATE IN C-2A AIRCRAFT MULTIYEAR CONTRACT

In June 1983, the Navy signed a $678 million multiyear contract with Grumman Aerospace Corporation for procurement of C-2A Greyhound aircraft. The contract is specified in then-year dollars using an inflation rate of approximately 7 percent. The actual inflation rate has been running lower than the 7 percent rate specified in the contract. Therefore, it is expected that savings will occur due to lower than anticipated inflation.

QUESTION: Based on outlays to date, what is your anticipated savings for the fiscal years 1983 to 1985 procurements due to lower than anticipated inflation?

ANSWER: Based upon current trends the Navy estimates a savings of $15.7 million attributable to the C-2A EPA clause. These savings consist of $6.4 million from FY 84 and $9.3 million from FY 85. The EPA clause does not apply to FY 83. It is important to note that one of the Bureau of Labor Statistics indices used by the clause to measure inflation is no longer published. NAVAIR is currently negotiating with Grumman to select a replacement index. The replacement index chosen may result in changes to the above estimates. Since the multiyear contract is a fixed price type contract in the appropriation year, these savings will not affect the amount which must be appropriated in each year. The appropriations will expire prior to the adjustment of the contract price and the savings will revert to the U.S. Treasury.

QUESTION: What is the planned disposition of any inflation rate savings?

ANSWER: The savings, if any occur as a result of the business base/EPA clause, will accrue to the U.S. Treasury and will not be available for re-obligation by the U.S. Navy. The adjustments to contract price under this clause will take place only subsequent to the last delivery under each program year (1984 and subsequent).

QUESTION: Will all inflation rate savings accrue to the Navy?

ANSWER: Within thirty days after release of the first published non-preliminary indices subsequent to each affected program years scheduled aircraft deliveries, the contractor will submit a proposal which details, by calendar year, the abnormal economic fluctuation on the applicable program year. In the case of Fiscal Year 1984 aircraft lot, the last aircraft delivers in Calendar Year 1986. Therefore, the contractor will have 30 days from the release of the non-preliminary indices for 1986 to submit his proposal. It is currently expected that these indices will be released in March of 1987. This would mean a proposal due in April of 1987, followed by a Government evaluation of that proposal and the issuance of a contract modification reflecting the change to the contract price of the FY 84 lot of aircraft. Any increase or decrease impacting the FY 84 lot of aircraft will be an adjustment to the FY 84 appropriated funds. Because the FY 84 appropriation will have expired by this time, the savings will revert back to the U.S. Treasury.

CH/MH-53E SUPPORT COSTS

In the February 1984 budget submission, the Navy estimated the fiscal year 1986 peculiar ground support equipment costs for the CH/MH-53E would be $9.0 million for airframes, $1.9 million for engines, and $2.3 million for avionics. The February 1985 budget submission for fiscal year 1986 shows peculiar ground support equipment costs of $13.9 million for airframes, $4.7 million for engines, and $5.6 million for avionics. The increases in these line items were $4.9 million, $2.8 million and $3.3 million, respectively.

QUESTION: Why did the estimated airframe peculiar ground support equipment budget line item increase by $4.7 million for fiscal year 1986 between the February 1984 and 1985 budget submissions?

ANSWER: The 1985 budget estimates reflect revised baseloading strategy and associated support requirements for both USN and USMC aircraft. Although the FY 1986 requirement increased in the 1985 submit, the FY 1987 requirement decreased due to acceleration of the stand-up of the fourth USMC squadron. USN requirements increased in FY 1986 in the 1985 submit due to further definitization of MH requirements.

QUESTION: Why did the estimated engine peculiar ground support equipment line item increase by $2.8 million for fiscal year 1986 between the February 1984 and 1985 budget submissions?

ANSWER: The 1985 budget estimate reflects revised baseloading strategy and associated support requirements for both USN and USMC aircraft. Although the FY 1986 requirement increased in the 1985 submit, the FY 1987 requirement decreased due to acceleration of the stand-up of the fourth USMC squadron.

QUESTION: Why did the estimated avionics ground support line item increase by $3.3 million for fiscal year 1986 between the February 1984 and 1985 budget submissions?

ANSWER: The 1985 budget estimate reflects revised baseloading strategy and associated support requirements for both USN and USMC aircraft. Although the FY 1986 requirement increased in the 1985 submit, the FY 1987 requirement decreased due to acceleration of the stand-up of the fourth USMC squadron.

SH-60B (LAMPS MK III) REQUIREMENTS

The Navy's February 1985 budget submission requests a fiscal year 1986 procurement of 18 SH-60B aircraft for $370.5 million. The SH-60B unit flyaway cost is $14 million. The Senate Armed Services Committee recently approved $411.5 million for 24 SH-60B, an addition of 6 aircraft and $41 million. Naval requirements documents indicate that a procurement of 18 SH-60Bs will be sufficient to meet the needs of the fleet.

QUESTION: How many SH-60B aircraft have been delivered and how are they being used?

ANSWER: Thirty-one SH-60B helicopters have been delivered. Twenty-seven aircraft are assigned to the fleet for training and operations, one aircraft is assigned to the Operational Test and Evaluation Force, and two aircraft are assigned to the Naval Air Test Center. One aircraft was lost at sea during operational testing in February 1985.

QUESTION: Are there SH-60B's which have been delivered and are not currently deployed to the fleet? How many are there, where are they, and what is being done with them?

ANSWER: Of the thirty-one SH-60B's delivered, two are assigned to the Naval Air Test Center and one is assigned to Operational Test and Evaluation Force. These aircraft are used to conduct technical and operational evaluations, including development of Anti-Submarine Warfare tactics.

QUESTION: How many ships have been modified to handle SH-60B's?

ANSWER: Nineteen ships will be configured with LAMPS MK III equipment by the end of FY 1985.

QUESTION: How many SH-60B's will be delivered in fiscal years 1985, 1986, 1987 and 1988? How many ships are scheduled to be modified (or delivered new) to handle SH-60B's in fiscal years 1985, 1986, 1987, and 1988?

ANSWER: Projected SH-60B deliveries follow: 24 in FY 1985; 24 in FY 1986; 24 in FY 1987; and 18 in FY 1988. [Deleted]. The requirement includes aircraft for shipboard operations, training, pipeline, and technical and operational testing.

SH-60B (LAMPS MK III) REQUIREMENTS

QUESTION: How many SH-60B's will each ship have?

ANSWER: SH-60B's will embark in FFG 7, DD 963, DDG 993, and CG 47 class ships. All FFG 7, DDG 993 and CG 47 class ships will be capable of operating (d) SH-60B's. The number of SH-60B's assigned to individual ships is based upon the planned employment of those ships. Ships expected to operate as escorts of convoys, Underway Replenishment Groups (URGs) and Surface Action Groups (SAGs) will have (d) helicopters embarked [deleted].

QUESTION: Will the addition of 6 aircraft for fiscal year 1986 procurement provide an inventory in excess of the SH-60B operational requirement in fiscal years 1988 to 1990?

ANSWER: SH-60B requirements are based upon projected LAMPS MK III ship availability. [Deleted].

Procurement rate is influenced primarily by projected ship availability with consideration given to economical and stable production. Procurement of 18 per year in FY 1986, FY 1987, and FY 1988 (with delivery two years later) [deleted].

Concurrent with introduction of ships is the standup of aviation squadrons, and training of detachment maintenance and flight crews. All delivered aircraft will be assigned to the fleet for training and operations.

F-14 POWERPLANT

The F-14A is currently being upgraded under contract to Grumman. The upgrade includes the development, integration, and evaluation of improved avionics, radar and powerplant. This new powerplant is the "marinized" version of the General Electric F110 engine. The original estimate for modifying the airframe to accept the new engine was $2.4 million per aircraft. However, this estimated cost has risen significantly.

QUESTION: What is current cost estimate for modifying the F-14A airframes to the upgraded configuration?

ANSWER: The current cost to modify the F-14A Airframe with the new GE F110 engines is $2.4 million per aircraft. These costs have not risen. These costs cover procurement of the modification kits and the cost to install the kit during a regular Standard Depot Level Maintenance (SDLM) period.

QUESTION: What is the reason for the significant cost increase?

ANSWER: There are no cost increases.

QUESTION: Have other upgrade costs risen above original estimates, and by how much?

ANSWER: Other upgrade costs have not risen above original estimates.

A-6E CONVERSIONS AND UPGRADES

Older model A-6E's have been converted to KA-6D tankers. These aircraft are then used for long range flight refueling missions. A May 22, 1984 memorandum, referencing a May 16, 1984 Navy program strategy board, states that conversions of A-6E's to KA-6D's will be discontinued. According to Navy officials, the aircraft originally planned for conversion to KA-6D's will now be upgraded as attack bombers.

QUESTION: Since the aircraft scheduled for conversion to KA-6D's were older models, how much will it now cost to upgrade them to attack bombers capable of conducting expected missions?

ANSWER: The cost to upgrade the older A-6E's to the current configuration is approximately $6.0 million (FY-84$).

QUESTION: How many aircraft are involved?

ANSWER: The original plan was to convert 48 more older A-6E's to KA-6D's. Twelve aircraft had been converted when the May 1984 decision was made to stop conversions. The remaining 36 aircraft will be modernized to the standard A-6E configuration.

QUESTION: Since the Navy does not want any single mission aircraft, what will be done with those A-6E's already converted to KA-6'D's?

ANSWER: The Navy will continue to utilize the KA-6D tanker aircraft aboard ship through the mid to late 1990's when the end of their service life will be reached. At that time those aircraft will be retired. We are developing a pod aerial refueling store that can be carried on any A-6E or A-7E to replace the dedicated tanker aircraft.

QUESTION: Where does the Navy propose to get funds to upgrade these aircraft?

ANSWER: The funds for conversion of older aircraft to the standard configuration are budgeted for in the APN-5 mod line.

AIRCRAFT SERVICE PERIOD ADJUSTMENTS

The Navy has historically scheduled their aircraft for depot maintenance when they reach a certain number of flight hours on the engines and months on the airframes. In January 1984 the Navy changed this and began basing these costly depot repairs on the actual condition of the aircraft. For the airframes this is called Aircraft Service Period Adjustments (ASPA). The FY-85 depot maintenance requirements were calculated based on a projection of airframes actually needing maintenance. For example, historical data shows that 15 percent more P-3 aircraft are being deferred for maintenance than were projected.

QUESTION: In FY-86, the Navy is requesting $419 million to purchase 9 new P-3C's. Was the success of ASPA factored into the Navy's P-3C requirements calculation? Has the ASPA success reduced P-3C aircraft requirements?

ANSWER: A large number of P-3's have passed first ASPA having their scheduled SDLM deferred one year. It is anticipated that in the future a smaller number of aircraft will pass ASPA each year. It is premature to speculate that the resulting reduced SDLM pipeline will affect total inventory requirements.

QUESTION: Has ASPA reduced requirements for other types of aircraft? Do you expect it to have an impact on the number of aircraft required in the future? If so, which aircraft?

ANSWER: To date, the full effect of ASPA on aircraft has not been totally assessed. After the induction rate has stabilized for a specific aircraft, the impact of the modified SDLM cycle and length of SDLM will be assessed and included in our calculations for pipeline aircraft.

FLYING HOURS

QUESTION: The Navy plans an increase of 119,000 flying hours in FY-86. What portion is due to increased inventory and what portion to training improvements?

ANSWER: The 119,000 flight hour increase in FY-86 will allow the Department of the Navy to achieve 87% PMR in TACAIR/ASW, provide Fleet Air Support sufficient flight time to sustain their increased requirement (brought about by the increased level of PMR) and give Fleet Air Training and Undergraduate Training the hours necessary to accommodate a higher student throughput.

The increase of 44 Naval Aircraft in Budget Activity II is expected to improve Department of the Navy's warfighting capability, increase operational readiness and provide more training opportunity by making these additional weapon systems available to the flight crews and reducing aircraft utilization. Increases in the number of flight crews as well as the Navy's attempt to attain its higher PMR is the basis for requesting additional flight hours. Since each of the aforementioned requirements provide some training, we are unable to quantify exactly what portion of the total increase will be devoted to training improvements.

TACAIR/ASW

QUESTION: Why is the average flying hours per aircraft for the H-60 increasing in FY-86? What assurance can be offered that this goal is attainable?

ANSWER: The 20% increase to train additional flight crews is the result of the following:

(1) The requirement to train additional crews in HSL-42, 43, 44, and 45.

(2) An increase in PMR in FY-86.

A nine hour per month increase in utilization will bring the overall rate for the H-60 aircraft to 49 hours per month. This level of operations for a new aircraft is easily attainable.

QUESTION: Helicopter flight hours are scheduled to increase by 29,000 flying hours in FY-86. Please provide those associated with force structure increases and the rationale for those increases. What mission goals have increased to justify this large growth?

ANSWER: Helicopter flight hours in TACAIR/ASW increase in FY-86 for the following reasons:

(1) PMR increases.

(2) There is requirement to train additional flight crews in HSL-42, 43, 44, and 45.

The PMR goal remains 88%. The level of PMR increases from 86% to 87% in FY-86 resulting in a higher number of flight hours. The Department of the Navy increases or decreases flying hours as a result of increased flight crews generated by force structu changes. Flying hours are also increased to provide flight cre enhanced proficiency in aircrew training, battle group operations and service support.

QUESTION: The FY-85 budget predicted an increase of 10 AV-8Bs but the OP-20 shows an increase of two. What confidence do you have that the FY-86 inventory will be achieved?

ANSWER: A review of the FY 85/86 Congressional OP-20 predicts an average inventory increase of 24.5 AV-8Bs vice an increase of two. Due to AV-8A/C aircraft end of service life retirements during FY 85/86, the total average AV-8 inventory increase is ten aircraft. The predicted AV-8B production schedule is being accomplished. We are most confident that the Department of the Navy's FY-86 inventory objective will be acheived.

FLEET AIR SUPPORT

QUESTION: What is the requirement for additional C-2 hours? Is there an additional aircraft carrier deployed in FY-86?

ANSWER: The increased flight hours for the C-2 aircraft are to support higher utilization attributable to the phase-out of the C-1 aircraft. The aircraft carrier deployment schedule is not expected to increase in FY-86.

QUESTION: Please explain the increased requirement for helicopter flying hours per aircraft and in total for H-46, H-53, H-3, H-2, H-1 and H-60.

ANSWER: The increase in flight hours for helicopters including the H-46, H-53, H-3, H-2, H-1 and H-60 are to provide additional training, support the increased level of flying in TACAIR/ASW and accommodate the increased number of crews brought about by standing up HC-5.

QUESTION: Please explain the cost changes in Flt Ferr as displayed in the OP-20 for FY 84-86. What is causing the increase in flying hours?

ANSWER: The requirement to deliver more aircraft with higher fuel consumption rates to the rework facilities has caused the aggregate barrel per hour rate in VRF-31 to increase, driving fuel cost per hour up. The delivery of A-6E and F-18A aircraft for special rework has increased VRF-31's flight hour requirement for FY-86.

QUESTION: What is the additional requirement for logistic support aircraft.

ANSWER: The average operating aircraft in the Fleet Air Support role reflects an increase of 3.5 aircraft from FY-85 to FY-86. These increases are a result of approved multi-year procurement plans in support of the increasing size of the U.S. Naval Fleet and the logistics requirements generated by this increase.

Question: The FY 85 request for TAD per diem days was 1,895,673. Please explain the increase of 188,076 days in FY 1985, and the additional 139,000 increase in FY 86.

Answer: The increase reflects the operational travel requirements for Navy/Marine Corps TACAIR/ASW and Fleet Air

Support Squadron personnel in performance of day to day operations, such as personnel training, squadron deployments to weapons ranges, P-3 squadron taskings, and participation in service and joint service exercises. Per diem days displayed on page 1-2-17 of the budget justification book and the Air TAD funding line on page 1-2-14 are not on a "one for one" basis, because Air TAD includes Per Diem, MAC Passenger Travel, and Other Travel Costs. Therefore, a decrease in TAD funding does not always decrease the number of per diem days since the reductions can be applied against the discretionary areas of other travel costs and MAC passenger travel. "Per diem" however is not discretionary in that when personnel are ordered to perform TAD they are entitled by law to a per diem allowance. The FY 1986 request meets the requirements to support the operational and mission essential travel required to support 6 new squadrons, 3 squadrons transitioning to newer aircraft and other aircrew training increases. Additional justification is contained in page 1-2-16, item #7.

FLEET AIR TRAINING

QUESTION: The OP-20 shows an increase of F-5 flying hours. What enhanced mission is causing such a large increase?

ANSWER: The reason for the F-5 flight hour increase is additional requirements for adversary services. Support for the second F/A-18 Fleet Readiness Squadron (FRS) and the Naval Strike Warfare Center (NSWC) are two of the new requirements. The F-5 is used exclusively as an adversary aircraft to provide realistic training in Air Combat Maneuvering (ACM) to the fleet. It is also the only U.S. supersonic adversary presently available for every day training and is therefore tasked heavily.

QUESTION: Flying hours for "Strike" decreased by 546. Justification back-up discusses an increase of 2,400 hours for strike flying hours. Please explain this apparent discrepancy.

ANSWER: The "2,400" increase in the back-up justification is $2.4 million, not flight hours. The increase is associated with full year funding for Aviation Depot Level Repairables.

QUESTION: What is the cost of flying hours included in BA II associated with Strike University in FY-85 and FY-86?

ANSWER: The flying hour costs are $10.0 million in FY-85 and $11.9 million in FY-86.

QUESTION: What caused the emergence of an adversary requirement in FY-85. Why wasn't this requested in the FY-85 budget?

ANSWER: The Navy has a stated operational requirement for 48 supersonic adversary aircraft. Currently only 11 F-5 aircraft are available for use in supersonic role. These aircraft are the oldest in the inventory and are being flown 50-60 hours per month. Service life of the F-5 has not been fully determined and is under investigation. If the aircraft's service life cannot be extended, the aircraft will be removed from the inventory FY-86. The KF1R proposal was not received by the Department of the Navy in time to be included in the FY-85 budget.

QUESTION: Justification material states 12 KF1R aircraft are provided in a no-cost lease. Please explain the $24.6M cost associated with these aircraft in FY-85

ANSWER: KF1R was presented to the Department of the Navy as a no cost lease program, while maintenance of the 12 aircraft will be performed under contract through Israel Aircraft Industry (IAI). This contract is strictly a commercial service contract which provides 38 flight hours per month per aircraft at an 80% operational rate. The $24.6M is the cost associated with this maintenance contract.

NAVY FLIGHT TRAINING

QUESTION: Please explain the increased pilots and aircrews to be trained in Fleet Air Training Activity Group. When were these members inducted and when finished UPT?

ANSWER: Additional aircrew training in Fleet Air Training Activity groups (Fleet Readiness Squadrons (FRS)) is driven by the retraining of aircrews for force modernization, and the standup of the 14th Air Wing. As squadrons transition to new aircraft (i.e. the F/A-18 replaces the A-7 and F-4) fleet pilots will be retrained in the FRS in the new aircraft. Additional pilot increases are generated by first tour requirements of the 14th Air Wing. These pilots are provided by the Undergraduate Pilot Training (UPT) program.

UPT pilot assessions in the strike pipeline are inducted 20 months prior to predicted entry into the FRS to meet first tour requirements.

FLIGHT AIR TRAINING

QUESTION: What accounts for the substantial increase in flying hours per aircraft with AV 8Bs, C-4, H-1, and O-2?

ANSWER: As the AV-8A/AV-8B mix changes, the average number of aircraft at the Fleet Readiness Squadron (FRS) decreases in the near term. A higher utilization rate per aircraft is necessary to meet training requirements.

The TC-4C is used for Naval Flight Officer (NFO) training for the A-6. Inventory numbers remain constant while NFO training requirements have increased. More flight hours per aircraft are required.

The H-1 helicopter is being used to train 54 additional aircrews while slightly decreasing in aircraft inventory. Increased H-1 utilization rate is necessary to meet training requirements.

The O-2 is used to monitor ordnance deliveries on weapons ranges. Inventory numbers are decreasing while training requirements are increasing. Two areas of increased training requirements are in the Strike Fighter community and new range requirements for the Naval Strike Warfare Center (NSWC). More hours per aircraft are required to meet training needs.

BA 1 COMMUNICATIONS

Question: Please explain the decrease of 41,463 per diem days between the FY 85 request and the current estimate for FY 85.

Answer: The per diem days displayed in the FY 1985 President's Budget request were in error. The Committee Staff was notified and subsequently provided a corrected copy.

OTHER COSTS

QUESTION: Examining the OP-20 it appears aircraft types are experiencing significant cost per hour increases for "other" cost. Please provide a rationale for increases for these types. Include in your response why cost would be increasing for these, but not for other aircraft in the same Activity Group or aircraft class. PE 24156N A4F, EA-6B, TA-4F, TA-7C, TC-4C; PE 24262N S-3A, P-3B, CH-46D; PE 24453N CT-39E; PE 28015N TA-7C; PE 84745N T-2C, TH-57C; PE 26122N CH-53E; PE 26497M F-4S, CH-53E; PE 26126M TA-4F; PE 91212M UH-1N.

ANSWER: The increase in other cost is the result of the following:

(1) Higher contract maintenance costs.
(2) Increased component and engine repair costs.
(3) Aircraft aging.

In FY-86 funds were added to several aircraft types at the fleets' request to support an increased maintenance requirement brought about by the engine analytical maintenance program. The major impact of this increase is at the shore based intermediate maintenance facilities. FY-86 funding included only the shore based program elements.

For PE 8475N the increase in the "Other" cost is also attributable to conversion of T-2C organizational level maintenance from organic to contractor services that took place during FY-85. Rates for FY-86 reflect the cost of a full year of contractor-only maintenance. The TH-57 has been contractor maintenance (labor only) at the organizational level since FY-82. For FY-86, funding for parts support was transferred from Budget Activity 7 into Budget Activity 8 (Flight Training). The rates for FY-86 include parts cost as well as labor costs. Maintenance contracts are unique to each particular aircraft and have no bearing on other aircraft in the same Activity Group.

DEPOT MAINTENANCE

QUESTION: Why is the average cost increasing for SDLM between the FY 85 request and current estimate and FY 85 to FY 86?

ANSWER: The Navy's justification of estimates for the FY 1985 President's budget request cited that in FY 1985, 1,019 units of airframes rework would be accomplished for $454.5 million. In the same document for the FY 1986 President's budget request, the FY 1985 current estimate cites that 854 units would be accomplished for $416.5 million. This would indicate an increase in the average unit cost from $446 thousand to $488 thousand. However, in the FY 1985 budget request, the 1,019 units includes 146 units of mid-term inspections, field inspections and air worthiness inspections, which are not included in the 854 units cited in the FY 1986 budget request. The true change in average cost for SDLM between the FY 1985 request and the current estimate is from $459 thousand to $488 thousand; an increase of $29 thousand. This increase is due to changes in the types of aircraft that will undergo SDLM. An example would be an increase to the rework requirement of 1 unit costing $1.5 million to SDLM and a decrease of 1 unit costing $1.0 million; the net effect being no change to total units reworked but an increase in unit cost.

The increased average unit cost in the FY 1986 request over the FY 1985 current estimate is also due to a change in the mix of types of aircraft reworked coupled with allowable inflation factors.

QUESTION: Please explain the significant decrease in component rework cost from FY 85 to FY 86.

ANSWER: This decrease in component cost is the result of the aviation depot level repairables (2R COG) migrating to the customers account in the flying hour program. FY 85 contains half a year of component repair while FY 86 contains none. The only item remaining in this funding line is interim component repair which accomplishes contractor repair on new acquisition items which have not yet transitioned to organic Navy repair.

QUESTION: Please provide the Modification Installation costs by aircraft type in FY 84 through FY 86.

ANSWER: The following data by type/model includes both commercial and organic efforts within the Modification Installation program.

MODIFICATION INSTALLATION REQUIREMENTS
TYPE/MODEL
FY 1986 CONGRESSIONAL
($000s)

TYPE/MODEL	FY 1984	FY 1985	FY 1986
A-3	2186	3372	5297
A-4	585	980	2399
A-6	49969	64239	83034
EA-6	26544	48331	41644
A-7	8383	17906	18206
AV-8	805	1080	2691
F-4	12055	15395	6149
OV-10	-0-	1385	19413
F-14	20319	35044	43932
F-18	1856	7774	11461
H-46	8833	9914	24808
H-53	4646	2409	3891
H-2	933	1565	2262
H-1	231	4434	9449
H-3	3336	1794	23051
P-3	29330	42728	39517
S-3	8983	9696	10684
E-2	8859	13152	22444
C-9	131	172	756
C-130	35991	16885	3478
Misc Aircraft	3063	17657	8911
FEWSG	1099	576	1336
COMM AV/FS	1130	2261	3177
Other	12418	14471	9628
Total	241685	333220	397618

QUESTION: What are the program decreases associated with the EAMP Program in engine rework? Where are the offsets for intermediate maintenance occuring? (By activity group)

ANSWER: The basic premise of EAMP is that the majority of engines will be reworked at the intermediate maintenance activities (IMAs) vice depots to reduce transportation costs and spares requirements (shortened pipeline), and to take advantage of lower IMA labor rates. There are too many real-world variables which impact engine repair requirements/costs, including fleet force levels, aircraft flying hours, engineering/maintenance specifications, labor rates and material costs to track cost savings or avoidances specifically attributable to EAMP. However, we believe that the best available indicator of the success of EAMP is the IMA/depot split of reworks, and this split is tracked annually and integrated in depot maintenance budgets and POM planning. The actual (through FY 1984) and projected splits, in percentages, are as follows:

	FISCAL YEARS										
	81	82	83	84	85	86	87	88	89	90	91
IMA	63	61	66	65	69	72	71	75	76	77	78
D	37	39	34	35	31	28	29	25	24	23	22

Although one cannot reliably attach auditable cost savings/avoidances to the above figures, it is nonetheless valid to assume that engine rework costs to the Navy are reduced significantly by the increased IMA-level support of total rework requirements compared to costs without the EAMP. Effects of all management initiatives for engines, including EAMP, are included within the Engine Rework Program.

Flight Training

Question: FY-86 justification material discusses annualization of costs for JP5 conversion. A reference to this change is not apparent in the FY-85 justification. Please explain this matter. What product has JP5 replaced? What savings are accruing because of the change?

Anwer: Following submission of the FY-85 budget request, conversion to the sole use of JP5 aviation fuel by the Naval Aviation Training Command, originally planned to take place in FY-86, was accelerated into FY-85. The use of JP5-only was requried due to the safety hazards associated with the lower flashpoint/higher volatility of JP4 and the difficulty of extinguishing JP4 fires afloat and ashore compared to JP5. No cost savings will be realized due to this change.

Question: FY-84 flight hours included in the FY-85 budget request were 445,000. Actuals as reported in the FY-86 budget were 406,104. Please explain this change. What savings accrued because of the fewer hours flown? What is the effect of the fewer training hours on the request for Fleet training? On what were the additional funds spent?

Answer: Actual flight hours were less than budgeted due to reduction in both the pilot training rate (PTR) and the Foreign Military Sales (FMS) pilot training program. Since actual flying hour costs experienced in FY-84 exceeded budgeted rates, savings of only $676K were realized in the direct flying hour program. No savings can be attributed to the reduced FMS inputs since this is a reimbursable program. The decrease in training flight hours did not affect the fleet training program. The reduction in PTR was offest by increased fleet training requirements resulting from both unprogrammed interservice transfers and instructor-under-training requirements caused by the high pilot resignation rate. The savings were spent in the Other Base Operations account.

NAVY FLIGHT TRAINING

QUESTION: Pilot Training Loads have not been increasing during the past few years. Why is the requirement for training of new aircrews and the stand-up on new squadrons occurring? From where are the pilots and crews coming?

ANSWER: Pilot Training Loads have not increased in selected training pipelines due to cancellation of the 15th Air Wing and delay of the 14th Air Wing until FY-87. Training of new aircrews and the stand-up of new squadrons is occurring to meet the 14th Air Wing stand-up and force modernization requirements

Pilots and crews will come from steadily increasing training rates through future years.

F-14D UPGRADE

QUESTION: This year the Navy is budgeting $348.1 million for continuation of the F-14 upgrade program. This program involves replacement of the TF-30 engine with the F-110 engine, new digital avionics and improved radars for the F-14 aircraft. This is a $1.1 billion program, Mr. Secretary. To what extent is the upgrade of the avionics and radar packages for the F-14 truly common with the A-6, AV-8B and F-18? What is the percent of commonality between the F-14D avionics and radar packages and those of these other aircraft?

ANSWER: The F-14D avionics are more than 80% common with the existing aircraft or the A-6F. The F-14D radar is an outgrowth of the F-14A AWG-9 weapons system and as such is not common with the A-6F or AV-8B weapons systems. However the radar has more than 30 common SRA's with the F-15's APG-70 radar and 2 SRA's common with the F/A-18 APG-65 radar.

QUESTION: Will this commonality lead to major reductions in life-cycle costs for all of these aircraft? Can you quantify how much?

ANSWER: Avionics and radar commonality between aircraft types leads to obvious life cycle cost savings, particularly at Intermediate and Depot level support through decreased test equipment requirements, reduced spare inventory, and reduced training and enlisted specialization requirements.

Quantification of these life cycle cost savings across all four aircraft types has not been attempted; once the production configurations have been solidified, it may be possible to analyze expected life cycle cost savings.

QUESTION: The primary contractual elements for the F-14D upgrade include a firm fixed price letter contract, with a not to exceed priced option. When is the final definitization of the F-14D contract scheduled?

ANSWER: Definitization of the F-14D FSD contract is currently scheduled for Fall 1985.

QUESTION: What separate components of the F-14D engine contract unique to the Navy must be negotiated apart from the basic Air Force F110 contract?

ANSWER Navy-unique hardware which will be delivered as part of a complete built-up engine will be negotiated separately from the basic USAF contract negotiation, but will be included within the USAF contract. Examples are the Navy augmentor extention duct and the engine-mounted accessory gear box. Additionally, Navy-unique publications, peculiar support equipment, and spares will be separately negotiated and separately contracted.

QUESTION: The maximum production rate proposed for the F-14D is 30 per year. The unit acquisition cost of the F-14D is said to approach $68 million. Do you consider your procurement plan for the F-14D an economical one?

ANSWER: Yes, we consider the proposed production plan to be an economical one considering the fiscal environment we are working under and recognizing the neeed for balance and affordability. The dollar figure you cite is an average unit cost in then year dollars over the entire F-14D program, including support, spares, and non-recurring costs. The average unit recurring flyaway cost in constant FY 84 dollars is $30 million.

F/A-18 UPGRADE

The Navy is proposing a Phase I upgrade of the F/A-18 for the Marines which will provide the aircraft with an austere all-weather attack capability. We understand that a Phase II upgrade, involving use of the APG-70 radar technology could provide the F/A-18 with an in-weather attack capability.

The cost of developing this addition to the F/A-18 is estimated at $110 million. The cost ceiling you placed on the A-6F upgrade is $450 million.

QUESTION: Aren't you upgrading the wrong aircraft? Shouldn't you be looking at Phase II upgrade to the F/A-18 instead?

ANSWER: The Navy is studying the radar upgrade options to the F/A-18 based on Fleet requirements. The second block upgrade to the F/A-18, planned for FY 1989, will include radar improvements. However, these improvements will not allow the F/A-18 to substitute for the A-6 in the long range, all-weather strike mission.

The $450 million A-6F upgrade includes the following improvements in maintainability/reliability and survivability/vulnerability; Integration of F-404D (F/A-18 engine), stand-off target designation and ship classification radar in all weather conditions, air-to-air radars combined with added weapons stations for air-to-air missiles and fire prevention/detection improvements along with component hardening to improve survivability. The overall upgrade of the A-6 is much more involved than the F/A-18 radar upgrade.

F-14D UPGRADE

QUESTION: The subcommittee has supported Navy efforts to use firm fixed price R&D contracts with NTE (not to exceed clauses) on its aircraft upgrade programs. However, we have recently learned that the Navy has negotiated special contract clauses with Grumman committing it to continue minimum production of certain aircraft types. Can you explain why you have adopted this approach?

ANSWER: Both the F-14D and A-6F FSD contracts contain identical production continuation clauses as special provisions. Neither clause specifies a minimum production requirement but specifies, rather, that the pricing of the FSD contracts are premised upon continuous production of the current model A-6E through FY-87 and the F-14A/A(PLUS) through FY-88. The contractor's ability to accept the F-14D and A-6F contracts at a price highly favorable to the Government was based, in part, on the fact that the contractor would be able to draw on a shared pool of management and sustaining engineering available under the respective programs on an "as required" basis rather than have a staff totally dedicated to either the full-scale development program or the production program. A deviation request from DAR 3-807.1(b), for inclusion of these production continuation clauses into the contract, was approved by the Deputy Chief of Naval Material on 1 June 1984.

QUESTION: Doesn't this practice tend to lock the Navy into production programs to such an extent that you have lost significant flexibility in managing your APN account?

ANSWER: Because the A-6F and F-14D FSD contracts do not contain minimum production requirements, APN account flexibility is not affected. If the current model A-6E or F-14A/A(PLUS) production line is cancelled, the respective FSD contract will have to be equitably adjusted, resulting in a higher R&D cost for the program.

QUESTION: What are the threshhold clauses in the Grumman contracts relating to the F-14D and A-6F?

ANSWER: There are two threshold clauses in the Grumman contracts relating to the F-14D and A-6F. The first clause, entitled "Production Continuation" and contained in both FSD contracts, is activated only on complete cancellation of the current model production line before FY-87 for the A-6E and before FY-88 for the F-14A/A(PLUS). Activation of the clause will result in an equitable adjustment to the FSD contract only. The second clause, entitled A-6E Upgrade/F-14D Common Avionics Effort, is contained in the A-6F FSD contract only. This clause recognizes the fact that the cost of common avionic development is covered entirely by the F-14D contract and if the F-14D contract is cancelled, the contractor is entitled to an equitable adjustment to continue avionics developemnt for the A-6F. This clause is triggered by termination of the F-14D FSD contract.

QUESTION: What are the penalty clauses in the Grumman contracts for terminating A-6 production?

ANSWER: If the Government fails to contract for the Model A-6E Weapon System in fiscal years 1985 through 1987, the contract price shall be equitably adjusted only to the extent that the described management and sustaining efforts contemplated to be borne by A-6E production are required for the A-6E Upgrade Program. Any claim by the contractor under this clause must be asserted within one hundred twenty (120) days following enactment of the Department of Defense Appropriation legislation which fails to fund a production buy of the A-6E aircraft for one or more of the fiscal years 1985 through 1987.

ADVANCED TACTICAL AIRCRAFT

Mr. Secretary, you are requesting R&D funding in an FY 1985 reprogramming and in FY 1986 to start the Advanced Tactical Aircraft (ATA) program, which will develop a replacement in the 1990s for the A-6. Major portions of this program are classified, but there are some basic questions concerning the technology path to be followed that we would like to address.

QUESTION: To what extent will the ATA make use of existing technology from the Navy and also the Air Force in this development effort?

ANSWER: That will be determined during the concept formulation and Demonstration/Validation phases of the program. The missions of the ATA and the Advanced Tactical Fighter (ATF) are quite different. The ATA is a long range, high payload tactical aircraft designed for use aboard aircraft carriers. The ATF is a high altitude, supersonic cruise fighter which requires a much different type of engine and aircraft wing configuration. Many of the avionic boxes, however, can and will be common. The Navy and the Air Force have several co-development efforts such as the Integrated Communication/Navigation/Identification Friend or Foe Assembly (ICNIA), Integrated Inertial Sensor Assembly (IISA), Integrated Electronic Warfare Systems (INEWS), a new active array radar system and VHSIC computer processor systems. Further commonality is being explored. The ATA will be a robust but an affordable aircraft.

QUESTION: The ATA will use the F404 engine, which already powers the F/A-18. This would lead one to believe that the Navy will depend on this engine for quite some time for this aircraft.

How can we be sure that you won't come back in the future and ask for a new development program for a new ATA engine? Why is a new engine development program unnecessary for ATA?

ANSWER: The engine to be used in the ATA will be determined during the trade-off studies conducted during concept formulation. A wide range of choices will be considered: F404, F-110, Joint Advanced Fighter Engine (JAFE), and derivatives of those engines.

QUESTION: Why did the Navy pull out of the JAFE program with the Air Force? Is it solely because you don't require the supersonic capability for ATA?

ANSWER: The Navy has not decided on the ATA engine yet but we probably will not require a sustained supersonic cruise capability and the JAFE is projected to be too large, to have too much thrust, and to burn too much fuel for the long range/endurance and high payload requirements of an aircraft carrier size tactical aircraft.

QUESTION: Is there JAFE component technology you are looking at in your Navy engine component improvement programs?

ANSWER: Yes. The Navy is closely following all JAFE component improvement programs through the major engine manufacturer. The overall improvement of JAFE is the result of the synergistic effects of all improved components working together. These components are not retrofitable into existing engines without major redesign of all components.

NAVY JTIDS JOINT TACTICAL INFORMATION DISTRIBUTION SYSTEM)

QUESTION: Mr. Paisley, in November 1983, Secretary Lehman informed Congress of the termination of the TADCOM joint venture contract on the Navy JTIDS program. That contract was terminated due to cost overruns. After the Navy JTIDS program was recompeted and the contract awarded to ITT, it was hoped that would put an end to Navy JTIDS cost growth problems. What is the current financial status of the Navy JTIDS program?

ANSWER: The Navy JTIDS contract with TADCOM was terminated in November of 1983 because of projected cost overruns. The contract was restructured and reinstated with Hughes as prime contractor and ITT as major subcontractor. Maximum government liability of the restructured contract is capped at $147 million. The Navy JTIDS program does not have a cost growth problem.

QUESTION: Less than a year and a half later, the new Navy JTIDS contractors are also having cost growth problems. How serious is the overall problem, and what is the government's liability under the contract?

ANSWER: The Navy and Hughes entered the 50/50 cost sharing phase of the contract in FY-84. To date, the Navy has expended $121 million. The remaining $26 million of the $147 million government liability is budgeted for incremental expenditure through FY-88.

QUESTION: Navy JTIDS uses a different, more complex data distribution technology than Air Force JTIDS, and is years behind that program. Why shouldn't the services choose between one of the two technologies and obtain maximum commonality?

ANSWER: The Navy JTIDS program was granted Full Scale Engineering Development (FSED) approval one year after the Air Force entered FSED. Current schedules have the Navy requesting a production decision ten months after the Air Force. Both services have completed the majority of terminal development. Most of the remaining RDT&E costs are associated with integration and testing which are required regardless of which terminal is going to be procured. Navy estimates an additional $530-590 million funding would be required if told to use the Air Force terminal. Additional funding required for terminal redesign for shipboard environment, repackaging to meet space constraints in tactical aircraft, and engineering to satisfy higher power output requirements of ships and Navy airborne

C2. The joint operational requirements (JOR) doctrine for JTIDS defines a two phased approach for JTIDS which satisfies each services unique operational requirements. The Navy and Air Force programs comply with that guidance.

QUESTION: How much cost growth is the Navy willing to accept on DTDMA, rather than switch to Air Force JTIDS?

ANSWER: The Navy will not incur any cost growth in the development of its JTIDS terminal because the FSED contract is capped and limits government liability at $147 million. Air Force JTIDS is not an alternative. It does not satisfy simultaneous multiple warfare netting and capacity requirements. The Navy would have to spend an additional $530-590 million and delay deployment 3-4 years if it used Air Force JTIDS. Additionally, development of follow-on systems to supplement the shortcoming of Air Force JTIDS would be required.

QUESTION: Mr. Paisley, your written statement indicates that there will be a nine month slip in the planned IOC for Navy JTIDS as a result of the projected delay in the delivery of JTIDS terminals from the Hughes Aircraft Company. It also states that the Navy JTIDS contract will remain in force and the government has a capped liability of $147 million. How much cost growth is the prime contractor capable of absorbing without causing a break in the contract?

ANSWER: Hughes provided information to the HASC in March 1985 which states their confidence in recovering corporate investment in JTIDS during production, and from application of technolgical benefits to related systems resulting from JTIDS development. Corporate officials have expressed a commitment for Navy JTIDS to Congressional staffers, OSD and Navy officials during interviews over the last six months.

AIRCRAFT COMMONALITY

QUESTION: Mr. Paisley, in your written statement you note that the avionics improvements to the F-14D and A-6F share over 80 percent subsystems and software commonality. But what is being done to enhance commonality between Navy and Air Force system?

ANSWER: A joint service agreement has been developed between the Navy and the Air Force to establish commonality wherever practical in the Advanced Tactical Fighter (ATF) and Advanced Tactical Aircraft (ATA) programs. Cooperative development of critical technologies, subsystems and components is expected to reduce overall program costs and enhance inter-service commonality.

The Joint Logistics Commanders (JLC) was established to improve military effectiveness by identifying and exploiting opportunities for joint service cooperative efforts across the entire spectrum of our command responsibilities. The JLC has involved our line organizations more actively by establishing the Joint Aeronautical Commanders Group (JACG). The JACG is responsible for identifying opportunities for joint action at the non major system and sybsystem level and overseeing the initial establishment of approved joint programs. More specifically, the tri-service Joint Services Review Committee (JSRC) for avionics has been chartered to identify and develop joint avionics components and subsystems where such action makes good technical and economic sense, and where it is mutually beneficial to each service. A number of projects have already been initiated under JSRC sponsorship.

TACTICAL AIR OPERATIONS MODULE (TAOM)

Question: General Smith, the Marines are proposing to buy the first four modules for your Tactical Air Operations Center in FY 1986 at a cost of $86.3 million. But you don't start operational testing for the program until August, and that testing won't be complete until December.

When would you plan on executing the production contract --- before or after completion of operational testing?

General Smith: The production contract will be executed after completion of operational testing. Contract preparations have already begun and will be completed, except for final negotiations, during operational testing. Final contract negotiations will be done after completion of testing.

Question: Are the Marines totally satisfied with the work of the prime contractor on this program, particularly its logistics documentation?

General Smith: Overall, the Marine Corps has been satisfied with the work of the prime contractor, Litton Industries, Data Systems Division. Although the initial logistics documentation was unacceptable, Litton has corrected the problem and is now providing acceptable documentation.

Question: This program used to be called TAOC-85, because the IOC for the program was supposed to be 1985. Now the IOC is 1988.

What happened to cause a 3-year delay to TAOC-85?

General Smith: Program delays have been primarily associated with software development to include coding, testing, and integration. Although there have been some minor problems associated with hardware, these have not significantly contributed to delays in the program.

F/A-18 MODIFICATIONS

QUESTION: The FY 1986 estimate for Correction of Discrepancies in the F-18 was $3.7 million in the FY 1985 Budget Request and is $6.7 million in the FY 1986 Budget Request. Why does the FY 1986 request increase $3.0 million?

ANSWER: The FY 1986 estimate for Correction of Discrepancies in the F/A-18 was $3.7 million in the FY 1985 Budget Request. The increase to $6.7 million in the FY 1986 Budget Request is due to the addition of (7) Engineering Change Proposals. Engineering Change Proposal Modification Kits and their respective costs are as follows:

	(in millions)
Stabilizer Servo Cylinder	$1.836
Amp Control Unit ICS	.219
Battery Control Relay Unit	.304
Addition of Latching Relay	.343
BRU-32/A Breech Assembly	.343
Landing Gear Door	.219
Speed Brake Hinge Moment Reduction	.264
TOTAL	$3.528

QUESTION: The total program estimate for the Correction of Discrepancies program increase $29.4 million from $55.8 million in the FY 1985 Budget Request to $85.2 million in the FY 1986 Budget Request. Please explain the increases in the APN buy, spares and O&MN installations.

ANSWER: The following causes the total program estimate for the F/A-18 Correction of Discrepancies program to increase $29.4 million from the FY 1985 Budget Request to the FY 1986 Budget Request.

	(in millions)
o Addition of nine new Engineering Change Proposals in Fiscal Year 1984 to Fiscal Year 1990 timeframe (APN-5).	$13.8
o A total of 1656 additional F/A-18 aircraft requiring Engineering Change Proposal modification kit retrofits in Fiscal year 1984 to Fiscal Year 1990 due to the addition of nine new Engineering Change Proposals (O&MN).	$12.7
o Additional spares requirements due to addition of nine new Engineering Change Proposals (APN-6).	$ 2.9
Total Program Increase	$29.4M

EA-6 MODIFICATIONS

QUESTION: In the FY 1985 Budget Request, the FY 1986 estimate for the ICAP-I Update Program was $21.9 million. In the FY 1986 Budget Request, the FY 1986 request is $14.6 million for the same quantity. Please explain why the FY 1986 estimate decreases $7.3 million.

ANSWER: The FY 1985 Budget Request included the cost for 10 ship sets of contractor furnished parts and materials, maintenance diagnostics program ($5.7M), and budgetary cost for 10 government furnished ASN-123 display systems, ASN-130 inertial navigation systems, and AYK-14 computers. During the FY 1986 budget review, fiscal constraints required that Maintenance Diagnostics be deferred. Additionally, better-than-anticipated cost figures were obtained for the government furnished equipment which decrease dollar requirements ($1.6M). These reductions total $7.3 million.

QUESTION: The EA-6B Fire Protection System modification in the FY 1986 Budget Request shows $2.1 million in FY 1985 funds, yet the FY 1985 Budget Request contains no justification for this program.

Explain why this program was not included in the FY 1985 Budget Request and from where the funds were made available in FY 1985.

ANSWER: This modification was introduced during the FY 1986 NAVCOMPT Submission following the loss of an aircraft from an onboard fire. The urgency of installing a fire protection system on EA-6B aircraft prompted the earliest identification of funds to accomplish this effort. Funding sources for the Fire Protection System were identified within the EA-6B Mod programs as follows:

OSIP	TITLE	CHANGE
19-71	ALQ-99 POD	$ .541M
14-81	ICAP-I Update	1.504M
51-85	ALQ-76 POD Update	.011M
	Total	$ 2.056M

A-6 MODIFICATIONS

QUESTION: What is the status of the A-6E rewing (SLEP) modification program?

ANSWER: The Navy has had a program to rewing A-6s for a number of years. This was on-going at a very slow rate based on our earlier understanding of fatigue usage rates on the wings. The latest analysis and teardown of wings indicates we are using up wing life at a much faster rate. This led to aircraft groundings and flight restrictions on high fatigue usage aircraft. Our current rewing program responds to this accelerated need to retrofit/upgrade/unrestrict aircraft. This plan also is based on competitive procurement while all previous plans were based on sole source efforts with Grumman.

The procurement of new wings for the A-6 series aircraft has been competed and Boeing Military Aircraft Company has been announced as the winner of the competition. Funding has been identified for the firm fixed price nonrecurring design, fabrication, and qualification of five prototype wings. Execution of this contract is being held until the status of Congressional authorization/appropriation for the first production lot can be ascertained.

F/A-18 OMNIBUS WEAPONS MODIFICATION PROGRAM

QUESTION: What is the justification for a $42.6 million modification program to equip the F-18 with new or existing but not previously addressed weapons as requested in the OMNIBUS Weapons modification program?

ANSWER: The F/A-18 Omnibus Weapons modification program will configure previously delivered fleet-squadron F/A-18's with the additional weapons capabilities delivered in new production aircraft. As new air-to-air and air-to-ground weapons are introduced into the Navy inventory, some modification to existing aircraft is required. Examples of these weapons would be: AIM-7M, AIM-9M, HARM, SKIPPER, LASER MAVERICK, and GATOR.

F/A-18's MISSION REQUIREMENT

QUESTION: Doesn't the current configuration of weapons on the F-18 meet mission requirements? If not, why not?

ANSWER: Yes, the present configuration of weapons on the F/A-18 meets mission requirements. As weapons are improved, and as new weapons become available, certain aircraft modifications may be

required to accommodate them. This would require changes to new production aircraft and backfit modifications to older fleet aircraft.

AN/ALQ-126B

QUESTION: The AN/ALQ-126B Provisions programs requested $4.4 million in FY 1985 in the FY1985 Budget Request. The FY 1986 Budget Request shows the program beginning in FY 1986 with Approval for Full Production was expected in the last quarter of FY 1985. Previously, Approval for Full Production was expected in the last quarter of FY 1984. Why is the program slipping a year? What happens to the funds requested in FY 1985?

ANSWER: The $4.4M requested in FY85 in the FY85 Budget Request was denied. The entire ALQ-126B FY85 Budget was zeroed due to contractor late deliveries. Consequently, the test schedule also slipped; therefore, the request for Full Production slipped.

QUESTION: The total cost of this program has decreased $6.3 million, yet the number of kits to be procured increase by 174. Please explain why cost decrease while quantities increase.

ANSWER: In accordance with the lastest budget information, the ALQ-126B quantity has been reduced by 97 systems with an overall cost reduction of $25,905,000.00

P-3 MODIFICATIONS

QUESTION: Please explain why the ALR-66 Electronic Sensor Monitoring System program costs decrease $9.4 million from FY-85 to FY-86 for the same quantity.

ANSWER: The ALR-66 program costs decrease $9.4M from FY-85 to FY-86. While the quantity of kits in both FY-85 and FY-86 are identical (72), the quantity of GFE systems decreases from 45 in FY-85 to 27 in FY-86. The associated decreased cost for this reduction in quantity of systems together with a lack of trainer modification in FY-86 makes up the $9.4 million differential between FY-85 and FY-86.

QUESTION: The FY-86 Budget Request includes $3.4 million in FY-86 for a Survivability and Vulnerability modification. What is included in this estimate?

ANSWER: The $3.4M in FY-86 for S&V includes the prototype design and kit for the incorporation of the AN/ALQ-156 missile detection system and AN/ALE-39 CHAFF/FLARE Dispenser set into P-3C aircraft. It also includes the modification of three trainers for these systems.

S-3 MODIFICATIONS

The S-3A Weapon System Improvement Program includes $74.3 million for 2 kits and $3.7 million for spares in FY 1985 and $220.8 million for 22 kits and 44.2 million for spares in FY 1986.

QUESTION: Provide a breakout of cost and systems for kits and spares for FY1985 and FY 1986.

ANSWER: A breakout of cost etc. follows.

	($K)	
	FY-85	FY-86
Aircraft modification kits (includes non-recurring)	30,396	106,710
Trainer modification kits (includes non-recurring)	22,859	55,163
Integrated Logistic Support	21,004	58,921
Total APN-5	74,259	220,794
Modification of spares	1,658	23,638
New spares	2,023	20,582
Total APN-6	3,681	44,220

The S-3A Weapon System Improvement Program also includes a total of 37.9 million for O&MN installation, $16.2 million for O&MN trainer installation and $9.6 million for O&MN training.

QUESTION: Explain the need for both O&MN installation and trainer installation funds. Also explain why O&MN trainer installation costs begin in FY 1987 while O&MN training begins in 1985.

ANSWER: O&MN installation aircraft funding starts in FY-87 to begin installation of aircraft modification kits procured in FY-85 and FY-86. Trainer installation funding starts in FY-87 to modify trainers that support aircraft update. O&MN training begins in FY-1985 to develop and conduct factory training courses and course ware modifications to existing training courses for initial fleet introduction in FY-87/88.

COMBAT AIRCRAFT FORCES

QUESTION: Admiral Martin, a CBO analysis last March says the Navy's 5-year aircraft acquisition program doesn't match your stated air wing requirements. What is your assessment of the CBO analysis?

ANSWER: The CBO analysis is based only on unclassified data and does not, in all cases, reflect present Navy plans with regard to inventory and force structure requirements. The CBO analysis is relatively accurate, but it is our belief that their conclusions regarding shortfalls and excesses are overstated.

Because of fiscal constraints which conflict with procurement objectives to buy aircraft at economical rates, shortfalls and surpluses of specific models may occur from year to year. Additionally, declining inventory may be acceptable in an aircraft type for which a replacement is imminent.

Long term major shortfalls or surpluses, generated by changing force level requirements or fiscal constraints, are identified and corrected annually during the POM process. Near term inventory shortfalls are managed carefully to ensure that squadrons deploy with a full complement of aircraft.

Question: What budgetary adjustment could be made in fiscal year 1986 to realign the procurement strategy with the stated requirement?

Answer: The President's budget, as submitted, supports fully an orderly transition to stated airwing requirements within force level and fiscal constraints. No budgetary adjustments are therefore required.

SAC F-14

QUESTION: Based on CBO's projection, Navy is planning to buy 26 more F-14's than it needs and we're told that 28 F-14's are sitting in storage today at Norfolk and North Island Naval Air Stations. Why does the Navy need $802 million in fiscal year 1986 to buy 18 more F-14's?

ANSWER: F-14 procurement plans will not provide sufficient assets to meet projected requirements during the FY-87 through FY-89 period; thus the Navy does not agree with the CBO projection. The aircraft in storage are either awaiting overhaul or repair. The majority of the stored aircraft are the non fleet deployable Block 60/65 aircraft that will be remanufactured starting in September 1985 and will be assigned to the third and fourth reserve F-14 squadrons.

Based on the F-14 procurement profile contained in the President's January 1985 budget submission, attrition projections calculated using actual experience, and schedules for transitioning active and reserve squadrons from F-4 to F-14 aircraft, the Navy's requirement for F-14 aircraft verses anticipated inventory is:

F-14 Requirement vs Inventory

(number of aircraft)

End of:	FY-84	FY-85	FY-86	FY-87	FY-88	FY-89	FY-90
Requirement	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Inventory	(D)	(D)	(D)	(D)	(D)	(D)	(D)

Changes in requirement are due to:

FY-85/86 Transition of one reserve squadron in each year.
FY-87 Transition of two active squadrons to provide for the twelfth F-14 air wing and the third reserve squadron.
FY-88 Transition of fourth reserve squadron offset by reduction in number of aircraft assigned to four active squadrons.
FY-88/89 Reduction in number of aircraft assigned to four active squadrons each year.

A reduction in F-14 procurement in FY-86 or FY-87 will further increase the shortage of F-14 aircraft in FY-87 through FY-89.

SH-60B PROCUREMENT

QUESTION: The planned purchase of 155 LAMPS MK III helicopters is ten more than the Navy's requirement. Does the Navy need the 6 additional helicopters added by the Senate Armed Services Committee above the 18 budgeted?

ANSWER: The total requirement for production configured SH-60B helicopters is 204. The requirement includes: Aircraft to support 95 LAMPS MK III ships with a mix of single and dual aircraft detachments; training and pipeline aircraft; RDT&E aircraft for development and testing of planned product improvements; and force assurance procurement to ensure an adequate force structure through the year 2003 (20 years after IOC).

The rate of procurement of SH-60B's is directly influenced by the projected availability of LAMPS MK III ships. [Deleted].

Procurement of six additional SH-60B helicopters in FY-86 would result in a lower unit cost due to a more economical production rate, the additional aircraft would be used in fleet squadrons for training of maintenance and flight crews.

A-6 INTRUDER AIRCRAFT

QUESTION: Admiral Busey, Navy is grounding or restricting A-6E attack aircraft with wing fatigue problems, but no funds are budgeted to fix the problem. What is the Navy's estimate to correct the A-6 aircraft inventory wing fatigue problem?

ANSWER: The Navy had always planned to rewing A-6 aircraft and had a limited amount of funds budgeted. However, this anticipated a 4500 hour life. When data and reanalysis proved that the life was 2200 hours (Dec 84), the funds budgeted were insufficient to accommodate the accelerated rewing program; and it was too late to address the issue in the FY-86 Congressional Budget. $108 million available to the A-6 program was reallocated for competition and design, fabrication, and qualification of a new wing. Funding shortfalls for the new wing are for production of wings for FY-87 and subsequent aircraft and for retrofit of A-6E's. The estimate to cover this problem cannot be precisely answered because it is highly dependent on the rate of wing procurement in the early production lots. For example, if we buy 48 wings in the first production lot, the unit price is $4.993 million; however, if we buy only 12 wings, the unit price is $11.175 million.

QUESTION: The Navy is about halfway through a $2.7 billion A-6 modification program. Is a rewing program incorporated into the future modification package?

ANSWER: The present A-6 modification program included a modest A-6 rewing effort predicated on the estimated 4500 hour fatigue life. With the groundings/restrictions imposed in Dec 84, this modification will have to be substantially expanded/accelerated.

QUESTION: Why are no funds budgeted in fiscal year 1986 to fix the A-6 wing problem? Why should Congress approve $238 million in R&D to develop the new A-6F variant when the budget doesn't support the needs of the existing A-6 inventory?

ANSWER: Some funds are budgeted in FY-86 to address A-6 rewing at a modest rate based on previous fatigue life estimates. Reassessments and subsequent groundings/restrictions occurred late Dec 84 - too late to influence the FY-86 Congressional Budget. The $238 million R&D for the A-6F is required in order to modernize the A-6 and keep the Navy's only all-weather, day/night, long range attack ~~aircraft~~ as a viable weapon system until replacement by the ATA. A solution to the wing problem has been solicited competitively and a very attractive offer received from Boeing for an 8800 hour (full airframe life) wing. Funds to increase the existing A-6 rewing program to accommodate the new competition wing are in process of being identified.

QUESTION: We're told the solution to the A-6 wing problem is to strengthen the wings by adding weight. Won't this lower the range and payload capability?

ANSWER: The Navy's specification for the new competition wing was for a weight not to exceed the existing A-6E wing weight. This was achieved by the Boeing design which will build the wing principally out of graphite epoxy.

QUESTION: By diminishing range, the A-6 starts to fall within the operating parameters of the F/A-18. Instead of introducing the new A-6F, why not substitute F/A-18's for the bombing mission?

ANSWER: The new wing has the same weight and fuel volume as the existing wing. Therefore, range is not reduced. Moreover, the F/A-18 cannot carry the equivalent payload the same range as an A-6; i.e., it cannot perform the A-6 all-weather, day/night, long range attack mission.

AV-8B HARRIERS

Question: General Smith, the first AV-8B trainer is scheduled to deliver in 1987, but you still estimate an additional $80 million in development costs. Why is the trainer concurrently produced and developed?

General Smith: Due to 92% commonality between the AV-8B and the TAV-8B, the aircraft is considered a low technical risk. This coupled with the need to replace the TAV-8A as they reach end of service life, requires concurrency in production and development.

Question: By the time the first trainer arrives, you plan to have three operational squadrons. How are you qualifying pilots in the interim?

General Smith: The majority of the pilots qualified are experienced AV-8A pilots which require only one sortie each in the TAV-8A prior to flying the AV-8B. The remaining pilots are qualified with 14 TAV-8A rides and extensive training in the new systems trainer recently installed at Cherry Point. The pool of experienced AV-8A pilots and A-4 transition pilots will be gone about the time the first production TAV-8B reaches the fleet.

Question: Since you don't have trainers on line, is it prudent to ramp up production from 32 to 46 aircraft in fiscal year 1986?

General Smith: It is necessary to ramp up production from 32 to 46 aircraft to allow tactical inventory objectives to be met. Until the TAV-8B trainer reaches the fleet, the majority of the pilots qualified will be experienced AV-8A pilots which require only one sortie each in the TAV-8A prior to flying the AV-8B. The remaining pilots are qualified with 14 TAV-8A rides and extensive training in the new systems trainer.

Question: The Marines are developing an austere night attack program involving a British FLIR, night vision goggles, etc. Have you considered keeping the production line at 32 so that you can phase in the night attack program without an expensive back-fit program?

General Smith: The higher production quantities are required to meet our schedule to stand-up AV-8B squadrons as aging AV-8A/C aircraft reach the end of their service life and A-4M's are transferred to modernize the reserve forces. We are currently examining methods which will enable us to minimize costs associated with a backfit program. This analysis will be complete after we finish the design phase for the production incorporation.

Question: The budget proposes to ramp up production even though the current delivery schedules are slipping several months. Are you confident that the production line will catch up before acceleration begins? Why?

General Smith: The AV-8B delivery slip was primarily caused by unanticipated wing fuel leaks that have since been corrected and have not been re-experienced on the manufacturing assembly line. The fix for this particular type of manufacturing start-up problem (although very labor intensive) has only resulted in a cumulative delay of 3 aircraft through the first 20 months of the program and this equates to time delay of 6 weeks (not several months). The Fiscal Year 1988 delivery rate of almost 4 per month will be preceded by a gradual rate build-up during the next 27 months. McDonnell Aircraft's product lines have demonstrated sustained monthly rates of 70, 9, and 10 on the F-4, F-18, and F-15 programs respectively. This past performance gives us added confidence that the AV-8B's rate of 4 aircraft per month will be comfortably met.

Question: For the AV-8Bs currently in production, funded in fiscal years 1983-84, you assumed a foreign currency exchange rate of $2 to 1 pound and $1.38 to 1 respectively. With current rates at about $1.10, what contract savings are anticipated?

General Smith: We have just recently made the contract adjustments for currency exchange rate on the Fiscal Year 1983 contracts and it resulted in a savings of $26 million. The Fiscal Year 1984 contracts will not be adjusted until next year since significant costs are not yet outlayed. However, we do not expect savings to be as much as Fiscal Year 1983 since the obligation rate was lower ($1.38) and the current exchange rates are around $1.28.

Question: The contractor's airframe proposal submitted in March is about $54 million below the fiscal year 1985 appropriated level. Is this an accurate estimate of savings, and are you anticipating a similar decline in 1986 contract cost?

General Smith: The contractor's airframe proposal was $41 million (not $54 million) below the value shown on the P-5 Exhibit of the Fiscal Year 1986 Congressional Submit. However, this proposal does not include costs associated with the new warranty features, as required by Congress, or the costs due to new R&M initiatives and Mil Std 1567 (contractor work measurement standard) implementation. We have allowed for these increases during negotiations and are forecasting a $1.0 million unit saving for both Fiscal Year 1985 aircraft and Fiscal Year 1986 aircraft less inflation effects.

V-22

QUESTION: Secretary Paisley, your R&D budget increases from $188 million to $603 million for continued development of the V-22 tiltrotor aircraft. Why is the R&D budget increasing so dramatically when the V-22 isn't planned to enter the fleet until 1991?

ANSWER: The increase in requested funds from 1985 to 1986 is required for the V-22 program to transition from Preliminary Design (PD) phase to Full Scale Development (FSD). PD is a 25 month program which has three specific objectives: (1) substantiate V-22 design criteria; (2) reduce technical and schedule risks, and (3) obtain the most-effective system by conducting design trade-off studies among specific operational requirements. The funding requested in the President's Budget is the essential amount required to begin FSD in late FY-1985. Included are the manpower and tooling ramp-up to develop six test aircraft and four ground test articles. All of the efforts in the PD and FSD are to assure first deliveries to the Marine Corps in 1991. The V-22 remains the only aircraft which can resolve the total Marine Corps modernization requirement. It is for this reason the 1991 deliveries must remain intact.

QUESTION: We've been told over the last three years that you needed the T-64 engine as an interim measure. Now you're planning to have a new engine developed in time to meet the 1991 operational date. How much concurrency will occur between airframe production and engine development?

ANSWER: The original JVX Program engine acquisition strategy pursued a dual engine approach to provide schedule protection and allow the development of prospective derivation or modern technology production engines. The second phase of the original engine program strategy included competition for a production engine, which was planned to be qualified in the latter part of Full Scale Development (FSD) testing.

An assessment of responses to the production engine competition determined that a production engine could be available for the first FSD flight testing and production. This led to the termination of the interim engine program in December 1984. This decision resulted in rescheduling of first flight to February 1988 and a restructured FSD test schedule. The greatest advantage of this action is the cost avoidance associated with interim engine development, flight testing and production. Without the interim engine, requirements for future retrofit funds are alleviated and a full combat mission capable aircraft is available in advance of the original plan.

MV-22

Question: General Smith, since the 1991 operational date is driven by the Marines, what would be the budgetary and program impact of slipping that goal a year or two?

Answer: The budgetary impact of a slip in the V-22 program automatically translates into a significant total program cost increase. Of major impact, however, would be the Marine Corps inability to comply with Defense Guidance concerning amphibious lift requirements in the mid-1990's if the program is slipped. The MV-22 is the only aircraft that can resolve a total Marine

Corps medium lift deficiency. There is no technical basis for a delay in this program. It is my conviction that, from the standpoint of total force operational capability, prompt and determined action in support of V-22 development for the Marine Corps is the only viable course of action to pursue.

V-22

QUESTION: We're told that the V-22 development program has been restructured and $700 million dropped from the total program estimate. What fell out of your plans?

ANSWER: The V-22 development program restructure was conducted after extensive preliminary design work examining program risks, completing trade-off studies and applying lessons learned during the last two years of the program. Along with the influence of preliminary design, total program costs were being evaluated by an independent cost analysis. In December 1984, the development portion of the V-22 program was capped at the FYDP 85 funding profile by the Department of the Navy. The cap and other aspects of the program being refined and scrubbed, resulted in a program restructure that would avoid 700 million dollars in program costs with no increase in technical or scheduled risk.

The restructure resulted in the following changes to the RDT&E program:

1. Deletion of award fee.
2. Reduce flight test vehicles from 7 to 6.
3. Delete turreted gun.
4. Delete Radio Frequency Jammers.
5. Terminate interim engine.
6. Change intermediate and depot level support funding to production.

QUESTION: What is the Reserve mission for the V-22?

ANSWER: The reserve mission for the V-22 in the Navy is to maintain proficiency in Combat Search and Rescue, Special Operations and a secondary mission of logistics support. The reserve mission for the V-22 in the Marine Corps is medium assualt transport. As with all reserve forces, these units provide a base upon which to draw combat capable units for contingency support and general mobilization.

QUESTION: The total number of V-22's required has dropped from 1,100 to 913, yet you're now planning to introduce V-22 into the Reserves. How did you manage to cover a new mission area, but decrease the total units needed?

ANSWER: During the past two years, the Services have been revalidating their requirements and updating the Joint Service Operational Requirement. The two most significant changes in requirements have been the deletion of the Army's Special Electronic Mission aircraft and the Air Force's Combat Search and Rescue mission. Along with lessons learned during Preliminary Design, the Services have solidified their requirements to the point that aircraft quantities are the minimum quantities expected to meet the Service requirements. It has always been planned in the overall scope of the program that the V-22 would be in the reserves early in the program. The Navy plans for one squadron of 10 aircraft in the reserves for Combat Search and Rescue and two Marine squadrons for combat assault.

QUESTIONS SUBMITTED BY SENATOR ANDREWS

AIRCRAFT READINESS

QUESTION: As you know there was a GAO report in 1983 that studied Navy Tactical Air Forces--Readiness, Deployability, and Implications for Decisionmakers.

One of the conclusions in that report, and this is unclassified, was that

"GAO believes that in assessing the Navy's fiscal year 1985 budget request and its actions to improve readiness, the Congress should take into account that the TACAIR forces' readiness is lower, perhaps significantly so, than reported to Congress."

We then saw reports in the press that only eight of the Navy's 14 aircraft carriers could be put to sea within two months of the outbreak of war, and only 60% of the Navy's warplanes are combat ready.

-- Has the Navy responded to the conclusions reached in the GAO report and could you give this Subcommittee an update on present readiness levels in the TACAIR forces?

ANSWER: The Assistant Secretary of Defense (Manpower Installations and Logistics) responded to the conclusions of the GAO in a letter dated 28 October 1983. The FY-1984 MC rate for Navy tactical aircraft was 60 %.

RELIABILITY AND MAINTAINABILITY

I have asked Secretary Pyatt with Navy Shipbuilding this same question and I would like to ask it of you as well because I think it is particularly important.

Plans are underway now in other services to place reliability and maintainability as high priorities in the criteria for procuring military equipment. The Air Force, before this Subcommittee, indicated that a fourth leg has been added to the "cost, schedule, and performance" drivers of military procurement so that it now reads: "cost, schedule, performance, reliability, and maintainability." The Air Force indicated, of course, this was critical to the procurement of their aircraft.

QUESTION: Can this Subcommittee expect the same developments in Navy procurement of aircraft? Particularly in light of the fact that a warranty is now required by law on the production contracts of military equipment?

ANSWER: About ten years ago the Navy recognized the need for increased priority for reliability and maintainability in the procurement of weapon systems and equipment. Particular emphasis has been placed on early design and test processes which are critical to effectively gaining required reliability and maintainability. Air systems now entering service have demonstrated the benefits of this increased priority and we intend to continue priority for reliability and maintainability in the future. Warranties should be a useful adjunct to our emphasis on reliability by providing implicit incentivies for contractors not only to satisfy design requirements but also to sustain the reliability achieved in development with sound quality discipline in production.

A-6 REWING

QUESTION: Admiral Martin, you mentioned in your testimony that the Navy will be asking for warranties on the new wings for the A-6 aircraft. Could you provide this Subcommittee with the kind of warranty the Navy will be asking for on the wing? Also provide for the Subcommittee, the advantages the Navy has assured in asking for warranties on these wings?

ANSWER: The new competed wing will have a warranty consisting of the following elements:

(a) unlimited latent defects;
(b) material and workmanship for two years;
(c) five years on performance requirements of the specifications;
(d) 8800 hours of fatigue life (based on fatigue test spectrum as measured by an on-board fatigue monitoring system) for the primary wing structure. Contractor's liability is capped at 15 years.

The advantage the Navy gains is never having to rewing the A-6 again. Should some unforeseeable failure occur, the contractor will be required to replace wings and/or fix wings that have been delivered and incorporate design changes in future production wings to eliminate the particular failure mode.

QUESTIONS SUBMITTED BY SENATOR KASTEN

FATIGUE REQUIREMENTS

Admiral, you said in your statement that the A-6E is the only all weather attack aircraft in production in the free world. When we first started buying this platform in 1959 there weren't any specifications for fatigue requirements. Since then, A-6E's maneuver more and carry much more of a payload. Consequently, the fatigue life of the aircraft is increased 75 percent over what it was designed for!

(In the 1950's this plane was built to carry a 2,000 lbs. nuclear warhead. It is now delivering up to 12,000 lbs. of bombs! The stress that results from this load is in the wings where the bombs are attached.)

QUESTION: Can you go into a little more depth concerning what measures are being used to meet the current fatigue requirements?

ANSWER: The A-6 was designed for the medium attack role that included special weapons carriage but that was not the exclusive design role. A specific wing fatigue life was not a design requirement. Initial wing tests demonstrated a 2200 hour life which was considered adequate considering the then planned life of the aircraft. A mid 1970's analysis projected a 4400 hour life based on actual usage. The 1984 analysis and detailed tests proved that the initial 2200 hour estimate was correct and as a result, a significant number of wings were over-age.

The wing fatigue problem was not a result of ordnance loads too heavy for design specifications.

The Navy is procuring a wing that will have a warranty of 8,800 hours thereby eliminating the future requirement for replacing the wing.

QUESTION: How are the current wing fatigue problems being rectified by the Navy and the contractor?

ANSWER: The Navy conducted a procurement competition for a new design wing that is stronger and has an 8,800 hour life warranty. That wing will be installed in 1987 and subsequent production A-6E/A-6F's and will be used to rewing older A-6E's.

The wing problem is not a contractor liability. The Navy got what it paid for in the original design wing.

QUESTION: Are there any alternative aircraft to the A-6E, such as a version of the F/A-18 or the ATA?

ANSWER: The A-6E is a unique aircraft with capabilities for long range, large ordnance loads, and all weather attack. The F/A-18 can not fill that role completely. The ATA will be designed to replace the A-6 aircraft in the late 1990's. The A-6F is a required upgrade to bridge the gap until the ATA is reality in the fleet.

AIRCRAFT PROCUREMENT

QUESTION: Admiral, the Congressional Budget Office Study discusses Navy plans for combat aircraft procurement. The study says that the largest shortfall will be of A-6E medium-attack aircraft. In 1988 the Navy will be short 56 A-6E aircraft which would provide a needed increase in offensive capabilities. To meet this need, substantial changes would be required in the Navy's plan for 1986. Do you agree there will be an A-6E shortage?

ANSWER: Yes, there will be an A-6 shortage [deleted].

QUESTION: What is being done to curtail this deficiency of A-6s?

ANSWER: [Deleted].

E-6A

QUESTION: Admiral I am receipt of a letter from Secretary Weinberger to the Chairman of the House Armed Services Committee. Secretary Weinberger states that E-6A replacement aircraft for the TACAMO mission is a key element of this effort.

Would you clarify what the Navy's position is on this aircraft?

ANSWER: The Navy is in agreement on the E-6A as the replacement for the EC-130 TACAMO aircraft and the E-6A is supported in the President's FY-86 budget.

BLACK PROGRAMS

Dr. Paisley, Black Programs make up 20 percent of the Department of Defense's Research and Development Budget for 1986. That is a 19 percent increase in black programs from 1985. I know the majority of these funds are placed there for national security reasons but more and more are being put there to get around the normal acquisition process. That means 20 percent of the R&D budget is hidden.

QUESTION: How much of the Navy's Research and Development is black?

ANSWER: A specific answer to these questions has been forwarded through appropriate channels, in the same manner that details supporting DOD classified programs are regularly provided. However, it can be stated that there is a negligible change in the percentage of Navy RDT&E funding committed to such programs in FY-86 as compared to FY-85.

QUESTION: What was the percentage increase from last year for Navy programs which are black?

ANSWER: A specific answer to these questions has been forwarded through appropriate channels, in the same manner that details supporting DOD classified programs are regularly. provided. However, it can be stated that there is a negligible change in the percentage of Navy RDT&E funding. committed to such programs in FY-86 as compared to FY-85.

QUESTIONS SUBMITTED BY SENATOR D'AMATO

SAC F-14

QUESTION: Please summarize the current improvement programs for the F-14 and highlight the important technological improvements in these programs designed to meet present and future hostile threats.

ANSWER: Under a single FIRM FIXED price FSD contract, there are two F-14 improvement programs; the F-14A(PLUS) program and the F-14D program.

The F-14A(PLUS) program will replace the TF-30-P-414A engine with the F110-GE-400 engine. All subsequent F-14's will have F110 engines. Introduction of the F110 engines into the F-14 will correct existing engine safety and performance deficiencies, provide improved high altitude cruise performance and provide higher specific thrust during combat maneuvers.

The F-14D program, being developed concurrently with the F-14A(PLUS), will upgrade the F-14's 1960's avionics suite, improve the radar and make provisions for integration of an infrared search and track system (IRST) under joint development with the USAF.

The avionics upgrade replaces outdated analog interface technology with MIL-STD-1553B multiple digital data bus interfaces to allow efficient integration of the new DOD programs: joint tactical information distribution system (JTIDS), the air-borne self protection jammer (ASPJ), the ALR-67 radar warning receiver and the advanced medium range air-to-air missile (AMRAAM) when it becomes available.

[Deleted].

TECHNOLOGICAL IMPROVEMENTS F-14 AND A-6

QUESTION: Would you please summarize the current improvement programs for the F-14 and A-6 aircraft and highlight the important technological improvements in these programs designed to meet present and future hostile threats?

ANSWER: The current A-6 improvement program is the A-6F which has design improvements in the areas of reliability/maintainability and survivability/vulnerability. The projected threat for the 1990's calls for improved utilization of the aircraft and incorporation of features to make it more survivable. Maximum commonality with the F-14D and F/A-18 aircraft was incorporated for improved supportability.

The A-6F incorporates an improved radar and avionics system to provide for stand-off targeting and ship classification. Two dedicated air to air missile stations were added for self defense weapons. The F-404D engine was added for the required thrust/speed due to weight increases. Improved fire detection/suppression features and hardened fuel system components were added to enhance survivability.

QUESTION: The A-6 fills many unique requirements essential to fleet strike capability. Do you intend to introduce the A-6 into the reserve?

When would the Navy like to do this?

ANSWER: The Navy is presently training reserves in the A-6 using regular training and fleet assets. We intend to procure aircraft in FY-86 and FY-87 in order to stand-up two reserve squadrons in FY-88 and FY-89.

QUESTION: The A-6E is the Navy's only all-weather attack aircraft capable of meeting unique requirements of fleet support under all flying conditions. Technological improvements are essential to improve the current A-6E aircraft against new threats in order to improve aircraft survivability and reliability against current and projected threats. Can you highlight the importance of the A-6 and its role in fleet strike capability?

ANSWER: The A-6 is tasked with long range power projection in all weather conditions. It is the only fleet asset available that can fly long ranges with large ordnance loads and deliver that ordnance in night/bad weather conditions. It is a critical capability that we must continue to maintain.

QUESTION: It has been suggested that additional F/A-18 aircraft can be purchased to fulfill the mission of the A-6E. Would you please comment on this?

ANSWER: While the F/A-18 is a very capable aircraft, it is a light attack aircraft with limited all weather capability that can not fill the role of the A-6. It does not have the long range, ordnance carrying and all weather capability required that the A-6 provides.

AIRCRAFT PROCUREMENT

QUESTION: A Congressional Budget Office report issued on March 4, 1985 analyzed the Navy's plans for combat aircraft forces. One of the report's conclusions was that by 1992 the Navy will be short some 366 aircraft of nine different types. The report states and I quote: "The largest shortfall will be of A-6 medium-attack aircraft." The report goes on to state that in 1988 the Navy will be short (d) A-6 aircraft, [deleted] [deleted] based on planned requirements. Would you comment on these projections.

ANSWER: The CBO analysis is based only on unclassified data and does not, in all cases, reflect present Navy plans with regard to inventory and force structure requirements. The CBO analysis is relatively accurate, but my analysis shows their conclusions [deleted].

In regard to the A-6, yes, there will be an A-6 shortage [deleted].

QUESTIONS SUBMITTED BY SENATOR STENNIS

DEVELOPMENT OF NEW A-6F AIRCRAFT

The Navy is proposing to develop a new version of the A-6 called the A-6F. This new aircraft will start production in 1988 in place of the A-6E. The Navy proposes to buy 150 A-6F's.

The 1986 budget contains about $240 million to continue development of A-6F aircraft. $83 million has been appropriated in 1985 and earlier. Orders for A-6E aircraft will continue through 1987.

The Navy also proposes to convert 150 A-6E aircraft to A-6F. Major changes include a new wing and a new engine.

QUESTION: The Navy is proposing to develop a new version of the A-6 -- the A-6F. What are the advantages of the A-6F over the existing A-6E?

ANSWER: The advantages of the A-6F are in the two main areas of reliability/maintainability and survivability/vulnerability. Maximum commonality with the F-14D and F/A-18 was designed for including the F-404D engine, F/A-18 auxiliary power unit, and common avionics such as INS, computers, HUD and other avionics systems.

Survivability and vulnerability improvements such as improved fire protection/detection systems, improved radar for stand-off target identification, fuel system hardening and dedicated weapons stations for air defense missiles make the A-6F a much more capable aircraft to meet the threat of the 1990's.

QUESTION: Why does the Navy need to continue production of A-6 type aircraft? Does the Navy have sufficient A-6 aircraft to meet its needs?

ANSWER: To fill the requirements of the notional airwing and reserve airwings programmed for the early/mid 1990's, continued A-6 production is essential. The shortfall of A-6 assets to fill these requirements between FY-1986 to FY-2000 is 80-100 aircraft at the procurement rate of the present FYDP. Additional A-6 assets must be procured and maintained until the ATA replacement comes on line in the late 1990's.

QUESTION: How does the flyaway cost in 1984 dollars of the new A-6F compare with A-6E?

ANSWER: Current Navy planning calls for procurement of 150 A-6F's. The average recurring flyaway estimate in 1984 dollars for these aircraft is $20.3 million. The recurring flyaway cost of the FY-84 A-6E is $18.7 million.

QUESTION: I understand that the new A-6E will be more economical to operate than the "F" version because direct maintenance man hours per flying hour will be lower, and the "F" version will use the same engine as the F/A-18. Is that true?

ANSWER: It appears that in the first two lines of the question, A-6E and A-6F are reversed. It is true that the A-6F will be more economical to operate. The Navy expects to achieve approximately 10 DMMH/FH reduction. In addition support costs will be reduced via commonality of systems (such as F404 engine which is common to F/A-18 and A-6F).

QUESTION: While the F/A-18 can also be used as an attack aircraft, I have been told that the F/A-18 cannot replace the A-6 because it lacks the range, payload and all-weather capabilities of the A-6. Is this true?

How important are these capabilities to the Navy TACAIR mission?

ANSWER: The A-6 and F/A-18 were designed for much different missions and combat environments. The A-6 is a high payload, long range, all weather attack aircraft while the F/A-18 is a medium range, limited all weather attack combined with the short range fighter role. Both aircraft missions are required. It is true that the F/A-18 can not replace the A-6.

QUESTION: The A-6E first entered production many years ago. Since then, what has been done to maintain the effectiveness of this aircraft?

ANSWER: Since the A-6 was introduced to the fleet in the early 1960's, there have been more than 400 airframe and system improvements/upgrades. The latest major improvement was the addition of FLIR/laser equipment for precise targeting, ship identification at night, and laser guided weapon delivery. We have consistently kept the A-6 up to date with equipment and capabilities.

QUESTION: What is being done to improve the capability of the A-6F as compared with the A-6E? Please provide a detailed statement for the record.

ANSWER: The A-6F modifications include two main areas of improvement in reliability/maintainability and survivability and vulnerability. An improved radar will allow precise stand-off targeting, air to air defense capability, and long range ship classification. The addition of 2 weapons stations for air to air missiles will reduce vulnerability to air threat defenses. Several changes to the fire detection/protection systems will increase survivability. Improved engines provide the required thrust/range requirements while providing increased reliability. Maximum commonality with the F-14D and F/A-18 will improve supportability. Overall, the A-6F is designed to counter the threat of the 1990's and will provide the required medium attack capability.

QUESTION: I have been told that, in development of the new A-6F, the Navy will develop a new wing with a long life that can also be used to economically upgrade planes in the existing A-6E fleet of aircraft. Is this a major advantage?

ANSWER: An improved wing design for the A-6F was planned at the outset but recent wing fatigue problems with A-6E's resulted in the decision to procure a wing that will be used for rewinging A-6E's and used on the A-6F. That wing will have an 8,800 hour warranty and will eliminate the requirement to rewing A-6's in the future.

A-6/KA-6 REWINGING

The A-6 is the only Navy carrier-based aircraft with a long-range, all-weather, night-attack capability. The KA-6D version serves as the primary carrier-based tanker aircraft.

Currently, the Navy has a serious wing fatigue problem with the A-6/KA-6. Approximately 20% of the aircraft are grounded, and 27% of the aircraft are restricted in flight operations because of wing fatigue.

The Navy proposed a two-part program to remedy A-6/KA-6 wing problems:

a. Install 57 existing new wings by 1987.

b. Develop a new wing for rewinging in conjunction with the development of the A-6F aircraft.

	A-6E	KA-6D	TOTAL	PERCENT
Total Aircraft	340	71	411	100%
Grounded	72	10	82	20%
Restricted flight operations	109	--	109	27%

QUESTION: What capabilities does the A-6 possess that cannot be performed by other carrier-based attack aircraft?

-- Range/payload?

-- All-weather, night-attack?

ANSWER: The A-6 is the Navy's only attack aircraft that has the required combination of ordnance carrying capacity and long range capability that fills the requirement for long range power projection.

The A-6 is the only carrier based attack aircraft in the world that has the capability to attack in adverse/night conditions where visual target acquisition is impossible. The Navy must have that capability in order to fullfill its mission.

QUESTION: What is the current problem with A-6 wings? How many aircraft are grounded? How many aircraft are restricted?

ANSWER: Recent wing fatigue analysis on the A-6 shows that the usable life did not achieve the expectations of the mid-1970's projection. Essentially, those wings have reached the end of their service life and require replacement.

- 72 A-6E's and 10 KA-6D's are grounded.

- 109 A-6E's are restricted.

QUESTION: What is the Navy's near-term solution to the wing fatigue problem?

ANSWER: The near term solution is to rewing the grounded aircraft using the remaining 57 wings in inventory/on-contract and finish rewinging of grounded and restricted aircraft with a new design wing. All grounded aircraft should be rewinged by the end of FY-88. Until that time, shifting of fleet assets is required to meet fleet requirements.

QUESTION: What is the Navy's long-term solution to the wing fatigue problem?

ANSWER: The long term solution involves acquiring a new design wing. A competition was conducted to design and build a 8,800 hour wing and Boeing Aircraft Company has won that competition. We will use that wing for future production aircraft and to finish rewinging restricted aircraft. We plan to have all aircraft rewinged by FY-92.

QUESTION: What are the advantages of using a newly designed wing?

ANSWER: The advantages are that rewinging in the future is eliminated due to the 8,800 hour life. The wing is lighter yielding range improvement. The new wing is stronger yielding tactical improvements, and the composite material eliminates corrosion which improves maintainability and helps to reduce maintenance manhours.

QUESTIONS SUBMITTED BY SENATOR PROXMIRE

AIRCRAFT CANNIBALIZATION

QUESTION: What is the extent of cannibalization of Navy aircraft now in the inventory--that is are you still borrowing parts from one aircraft in order to make other aircraft operationally ready?

ANSWER: Yes. The FY-1984 rate is 10.8 cannibalizations per 100 flight hours. The trend shows continued improvement.

TRAINING EXPENDITURES

Question: How many missiles does the average Navy pilot get to fire in live practice tests in one year?

Answer: The expenditure of air-to-air missiles for training is addressed on a per aircrew per tour and per squadron per training and deployment cycle basis. [Deleted]. [deleted] the following expenditure philosophy is utilized:

PHOENIX	(Deleted)
SPARROW	(Deleted)
SIDEWINDER	(Deleted)

*An average airwing training and deployment cycle is approximately 18 months.

FLYING HOURS

QUESTION: How many flying hours does our average Navy pilot get in one year compared to the average Russian pilot?

ANSWER: In FY-84 the average Department of the Navy pilot flew approximately 300 hours per year. The 4th edition of the Department of Defense publication Soviet Military Power states the flying hours for Soviet pilots range between 80 and 120 hours a year.

SALT COMPLIANCE

As I understand it, the ALASKA is due to be deployed in September. The Administration, however, has made no decision as yet as to retiring another sub to stay under the SALT limits.

QUESTION: As of today, has any decision been made on retiring a sub?

Have any plans been made to retire C3 missiles to stay under the 1,200 subceiling on MIRVed missile launchers in SALT?

ANSWER: A national decision has not yet been made concerning future U.S. actions with respect to the unratified SALT II Treaty. The Secretary of Defense has directed that planning be accomplished to ensure that dismantlement options involving Navy assets are attainable if a decision is made to continue the present "no undercut" policy.

NAVY AIRCRAFT INVENTORY

QUESTION: How many Navy combat aircraft will enter the inventory this year and how many Navy combat aircraft will be lost to attrition, accident, and retirement?

ANSWER: The Department of the Navy will have 223 combat aircraft enter the inventory during FY-85. The Navy predicts 47 combat aircraft will be lost due to accidents/attrition and 67 combat aircraft will be retired from the inventory during FY-85.

BLUE-GREEN LASER

QUESTION: What is the status of Blue-Green laser research and when will it be available for communicating with submarines?

ANSWER: Satellite laser communications for submarines is in the technology development stage. If such a system proves to be feasible and affordable, first satellite could be launched [deleted].

EXTREMELY LOW FREQUENCY (ELF)

QUESTION: Is it true that ELF will be limited in its useful broadcast range and therefore you are investigating the MILSTAR program?

ANSWER: The ELF broadcast will cover SSBN operating areas. MILSTAR has the potential to support a variety of submarine operations, [deleted] [Deleted] [deleted] to receive MILSTAR signals. Both ELF and MILSTAR will complement each other in support of submarine operations.

QUESTION: What are the weaknesses of the ELF program in terms of range and complexity of transmittal material?

ANSWER: The ELF system is designed to meet the operational requirements approved by SECNAV. The ELF broadcast will cover SSBN operating areas, and the majority of SSN operating areas. [Deleted] [deleted]. To verify that the ELF communications system meets operational requirements, it will be undergoing technical and operational evaluations this year.

QUESTIONS SUBMITTED BY SENATOR SASSER

ASW HELICOPTER

QUESTION: $30 million is requested for advance procurement for a new anti-submarine helicopter. According to justifications provided to the committee, procurement will begin in FY-87. Specifically, how would the mission of this ASW helicopter differ from the ASW mission of the OSPREY?

ANSWER: The SH-60F ASW helicopter is being developed to replace the aging SH-3H Carrier Inner Zone ASW helicopter. The SH-60F will provide the battle group with an efficient hovering ASW vehicle to employ active dipping sonar in the inner zone. The OSPREY has greater speed and forward flight efficiency. It would be employed in the outer zone. Its ASW systems would be advanced versions of the S-3A Viking aircraft. Additionally, outer zone mission requirements include anti-surface and anti-air warning to the battle group. Operational concepts for employment of the OSPREY in these missions are presently under investigation.

QUESTION: How does the Navy presently accomplish the carrier battle group inner zone ASW mission?

ANSWER: The SH-3H ASW helicopter based aboard carriers are employed in the inner zone.

QUESTION: The helicopter selected for this mission is the same as the Army's Blackhawk. The Army has recently grounded the Blackhawks. How will this affect the ASW helicopter program?

ANSWER: The grounding of the Blackhawks is not projected to have any significant effect on the CV Helo program. However, Army investigations will be monitored to determine if changes in configuration, maintenance, or operation are appropriate.

QUESTION: The Navy version of the Blackhawk is known as the Sea Hawk. It is my understanding that the Navy has not grounded the Sea Hawks, although the Army has grounded the Blackhawks and the commercial versions have been grounded. Why hasn't the Navy grounded the Sea Hawks until the problems are worked out?

ANSWER: The Navy has been closely following the Army Blackhawk losses and the subsequent investigations. In each case where material failure was a factor and the parts involved were identical or similar to those in the Sea Hawk, the Navy has taken appropriate action to ensure those parts are safe to fly. As an example, failure of a main rotor blade spindle is considered to be a factor in the most recent loss of an Army Blackhawk. The Navy has a main rotor blade spindle that is similar in function but different in design from the Army spindle. As a result of the Blackhawk accident we have reviewed the design and qualification program for the Navy spindle and are continuing to examine the procedures used for calculating spindle fatigue life. In the mean time we have established an interim operating limit for the spindle that will ensure safe SH-60B operations until the Navy investigation is complete.

ATA

QUESTION: What is requested for the advance tactical aircraft?

ANSWER: A new advanced aircraft weapon system will be required to meet all-weather attack mission needs in the late 1990's and beyond. The Advanced Tactical Aircraft (ATA) will be designed to perform this mission and feasibility studies will address ATA performing other missions such as fleet air defense and electronic warfare. FY-86 funds will support initiation of a concept formulation phase consisting of total system investigations of advanced all-weather medium-attack, fleet air defense and electronic warfare aircraft weapon system requirements, alternative design concepts, and technology implications. Additionally, funds will be used to initiate critical technology developments. The joint Navy/NASA oblique wing technology demonstrator will be included.

QUESTION: This new aircraft would replace the A-6. When do you plan to seek procurement funds for such an aircraft?

ANSWER: Production funds for an ATA would be included in the FY-95 budget.

QUESTION: The Air Force is proceeding with a new Advanced Tactical Fighter. Do you have an agreement with the Air Force to assure that your advance tactical aircraft development does not merely duplicate the development of the Air Force's new plane?

ANSWER: The Navy and USAF have jointly studied ATA and Advanced Tactical Fighter (ATF) requirements. The requirements are considerably different and therefore will yield two very separate aircraft with no duplication. However, the Navy and USAF have agreed to work toward maximum subsystem commonality between the two aircraft and have accordingly set up a Joint USN/USAF ATA/ATF Commonality Group.

A-6

QUESTION: It is my understanding that, of the 350 A-6's in the Navy's inventory, you have grounded 77. Why were they grounded?

ANSWER: They were grounded because recent analysis indicated the safe structural life of the wing has been reached or exceeded. Modern techniques of structural testing and analysis here-to-fore unavailable enabled the Navy to definitively quantify actual structure fatigue issues.

QUESTION: Has a new wing been selected for the rewinging of the A-6's?

ANSWER: A design/construction competition was conducted for an 8,800 hour wing for the A-6. Boeing was selected in that competition.

QUESTION: It has been suggested that it might be prudent if the Navy stopped production of new A-6's until the rewinging program had caught up. Is the Navy considering such a production halt?

ANSWER: The Navy is not considering a production halt for the A-6. Inventory shortfalls demand a continuing acquisition of the A-6. The prime contractor will provide a satisfactory warranty for the FY-86 production aircraft and the new design wing will be incorporated in all subsequent production aircraft.

QUESTION: A total of 18 A-6's are requested in the FY-86 budget. Will these aircraft have the new wing or the old wing? If it is the old wing, why shouldn't this request be deferred, until a new wing is developed and produced?

ANSWER: The Navy is requesting only six A-6E's in the President's FY-86 budget. The prime contractor will provide a warranty of 4000 hours average life for the wings on those aircraft. All subsequent A-6E's and A-6F's will have the new design 8,800 hour wing.

QUESTION: There have been recent published reports that the Navy's scheduled upgrade of the A-6 will overload the plane with incompatible weapons systems. Specifically, what is the current plan of the Navy for upgrading the A-6, aside from the new wings?

ANSWER: The Navy has periodically updated equipment and capabilities of the A-6. Those improvements include airframe and avionics equipment. The Navy is not experiencing any significant difficulties in integrating additional weapons systems such as HARM, MAVERICK and HARPOON.

We are upgrading the A-6 aircraft in a continuing series of planned block changes. They include the integration of air to ground missiles such as HARM, IR and LASER MAVERICK, and improved HARPOON. Safety improvements are being incorporated such as improved fuel system, electronic counter measures equipment, and flight control systems.

The A-6F program will improve the aircraft in the main areas of reliability/maintainability and survivability/vulnerability. An improved radar and computer system will permit precise targeting and ship classification from stand-off ranges outside enemy defenses. The F-404D engine will provide added thrust and much improved maintainability. Improved fire protection/detection and added air defense missile stations will improve survivability. Many more features will be included that are common to the F-14D and F/A-18 thereby improving supportability.

QUESTION: This aircraft was first delivered to the Navy in 1959. Yet, the budget request before us proposes $238 million in research and development funds for the A-6. Specifically, how will these funds be utilized, and why are R and D funds of this magnitude necessary for this aircraft?

ANSWER: The $238 million of research and development funds will be used for full scale development of the A-6F modification which will upgrade the A-6 capability to meet the enemy threat of the 1990's.

Major improvements are required to upgrade the A-6 which will bridge the gap in medium attack requirements until the ATA is developed and introduced into the fleet in the late 1990's.

QUESTION: Part of the upgrade is to fit the jet with new missiles, such as the HARM, the sidewinder and the advanced medium range air-to-air missile. Yet, Defense Week has published that recent tests at China Lake indicate that these missiles on the A-6 are "plagued with flaws." Is this a correct statement? Have tests been performed at China Lake, and what were the results?

ANSWER: The Defense Week article was inaccurate in many respects. The Navy is conducting an R and D program for the A-6 called Systems Weapons Integration Program which involves developing computer software and interface equipment for the integration of air-to-ground missiles on the A-6. Those missiles are: HARM, IR and LASER MAVERICK, and improved HARPOON. Sidewinder capability was developed on the A-6 many years ago and AMRAAM integration on the A-6 is programmed for the future.

The project work on the A-6 at China Lake is proceeding at the planned pace and has not developed any major problems. R&D developments commonly generate technical challenges but are worked out in the end. The A-6 project is progressing just fine.

Question: The Army is proceeding with the program to develop the Aquila remotely-piloted vehicle, although the program is three years behind schedule. It is my information that the Marines have rejected the Aquila because it is too complex, too expensive, and imposes a severe logistics burden. Is this correct?

Answer: In FY84, the Marine Corps RPV Program was zeroed with restrictive language requiring the Marine Corps to re-evaluate the U.S. Army Aquila program. At that time, the Aquila RPV was re-evaluated against the stated Marine Corps requirements. The results of the analysis revealed that Aquila does not satisfy Marine Corps requirements for a rugged, reliable system requiring minimum logistic and vehicular support for operation. Manpower requirements are high due to the number of vehicles and subsystems that comprise the Aquila RPV system. Even the now defunct Army Lightweight Aquila initiative offered no significant reduction in either manpower or logistic burdens over the Aquila. Additionally, a shipboard launch and recovery capability has not been demonstrated. In essence, the cost of the system and its inherent logistic and manpower burden rendered it unsuitable for the Marine Corps.

DRONES

Question: Is the Marine Corps utilizing a different RPV?

Answer: The Marine Corps is currently employing the Mastiff III RPV system. It was procured to support an urgent combat requirement of the Navy for target acquisition and naval gunfire spotting by the Marine Corps. The system is being used to develop concepts of employment for RPV development and operational deployment of follow-on systems to be procured through the Navy/ Marine Corps Joint Program Office (JPO).

SHORT TAKE-OFF

QUESTION: What is included in the request for the AV-8B vertical take-off and landing aircraft?

ANSWER: The basis for the FY 1986 budget request of 46 aircraft is to continue procurement of light attack capability aircraft. They will meet Marine Corps requirements to provide a light attack aircraft to provide responsive offensive air power that can operate from austere forward areas in direct support of ground forces.

F-14 SHORT TAKE-OFF

QUESTION: It is my understanding that in the fall of 1982, the Navy completed extensive tests on short take-off ski-jump launches of the F-14 at the Naval Air Test Center. What were the findings of those tests?

ANSWER: The F-14 achieved a 36% reduction in ground roll (nominally 1280 ft vice 2000 ft) using the ski jump. controllability of the aircraft in the event of loss of one engine was the main concern. Final clearances for fleet operational use would extend the ground roll.

QUESTION: Could the F-14 lend itself to a short-take-off role? If so doesn't this indicate that we could be building smaller carriers?

ANSWER: As can be seen from the take-off distance required even with the ski jump, unassisted deck launches would not be possible for the F-14. Minimum single engine control speed will limit minimum ski-jump launch speed to values that would not allow F-14 operations from a smaller ship without a catapulting system similar to that on present CV's.

SUBCOMMITTEE RECESS

The subcommittee will stand in recess until 10 o'clock, May 7, when we will receive testimony on the 1986 DOD space program budget.

[Whereupon, at 11:25 a.m., Thursday, May 2, the subcommittee was recessed to reconvene at 10 a.m., Tuesday, May 7, 1985.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 1986

TUESDAY, MAY 14, 1985

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10 a.m., in room SD-192, Dirksen Senate Office Building, Hon. Ted Stevens (chairman), presiding.

Present: Senators Stevens, Andrews, Rudman, Stennis, and Proxmire.

DEPARTMENT OF DEFENSE

DEPARTMENT OF THE AIR FORCE

STATEMENTS OF:

HON. THOMAS E. COOPER, ASSISTANT SECRETARY OF THE AIR FORCE FOR RESEARCH, DEVELOPMENT AND LOGISTICS

LT. GEN. ROBERT D. RUSS, DEPUTY CHIEF OF STAFF FOR RESEARCH, DEVELOPMENT AND ACQUISITION

WEAPONS AND TACTICAL MISSILE PROCUREMENT

BUDGET REQUEST

Senator STEVENS. Good morning.

We are here to review the Air Force and Navy weapons and tactical missile procurement and R&D programs for the fiscal year 1986. The total procurement budget request is $3.4 billion for the Air Force and $4.9 billion for the Navy. This is an increase of about $700 million for the Air Force and $900 million for the Navy, roughly a 13 percent increase in this request after inflation.

Today we will review the Air Force first and then the Navy for a number of programs, some of them jointly developed and procured. We hope to have an opportunity to discuss the full range of programs of each Service for no more than an hour each.

The importance of these weapons is highlighted by the fact that a number of key programs, AMRAAM and HARM, just to name two, have been discussed in the Services' respective aircraft hearings. We hope to pick up again some of those questions in reference to the testimony here today.

In the interest of time, we have requested the witnesses to keep their opening remarks brief.

INTRODUCTION OF WITNESSES

Our first witness is Dr. Tom Cooper, Assistant Secretary of the Air Force for Research, Development and Logistics, and Lieutenant General Robert Russ is back with us again—we are happy to see you again—Deputy Chief of Staff for Research, Development and Acquisition. This is your third appearance before our committee. We welcome you again.

Your written statements will be placed in the record in full.

Do you have any statement, Senator?

Senator STENNIS. I do not have a statement at this point, Mr. Chairman.

Senator STEVENS. Dr. Cooper.

MISSILE R&D AND PROCUREMENT PROGRAM

Dr. COOPER. Thank you, Mr. Chairman.

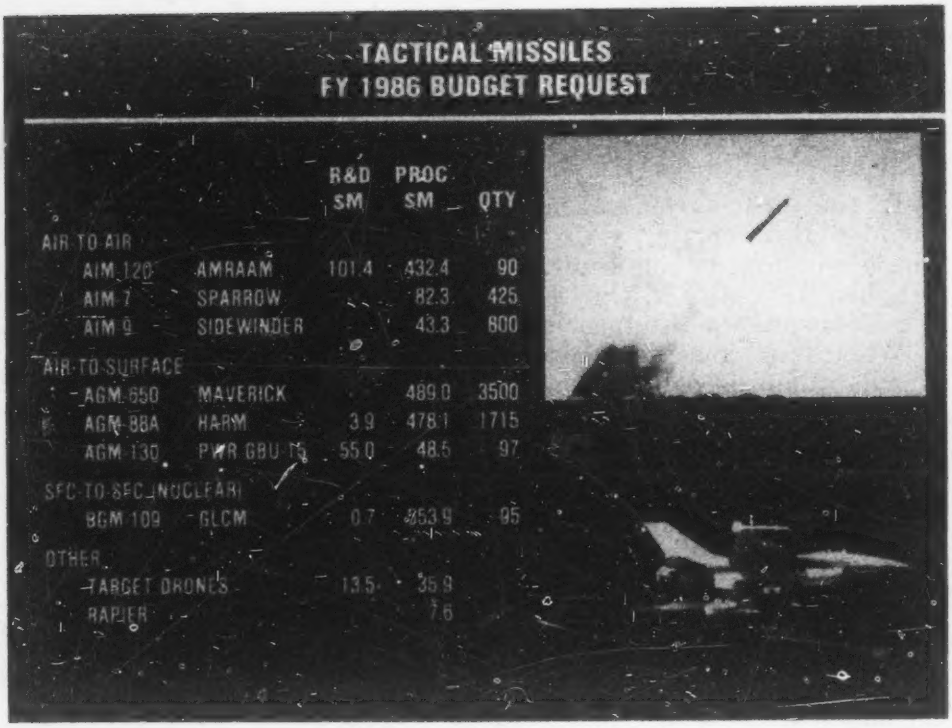
Senator Stennis, it is nice to see you again.

Mr. Chairman, we previously submitted a statement for the record so we will dispense with that. We have a one-illustration overview that General Russ will present that will summarize our missile R&D and procurement program. I would like to turn it over to General Russ.

After that, Mr. Chairman, with your concurrence, I would like to take a few minutes and discuss the Advanced Medium Range Air-to-Air Missile Program, the AMRAAM, as we call it, as well. Thank you.

General RUSS. Good morning, Mr. Chairman.

I have the shortest briefing I think on record. It is one illustration.



TACTICAL MISSILES
FY 1986 BUDGET REQUEST

		R&D $M	PROC $M	QTY
AIR-TO-AIR				
AIM-120	AMRAAM	101.4	432.4	90
AIM-7	SPARROW		82.3	425
AIM-9	SIDEWINDER		43.3	800
AIR-TO-SURFACE				
AGM-65D	MAVERICK		489.0	3500
AGM-88A	HARM	3.9	478.1	1715
AGM-130	PWR GBU-15	55.0	48.5	97
SFC-TO-SFC (NUCLEAR)				
BGM-109	GLCM	0.7	853.9	95
OTHER				
TARGET DRONES		13.5	35.9	
RAPIER			7.6	

ILLUSTRATION 1

TACTICAL MISSILE REQUEST

General RUSS. The tactical missile budget request this year is $2.1 billion for procurement and $175 million for R&D. As you notice on the illustration, we have it divided into four areas.

The first area is air-to-air missiles.

The second area is air-to-surface missiles.

The third, surface-to-surface missiles.

And the fourth is "Other" which includes some of our target drones and the Rapier surface-to-air missile.

Let me just wind down through each one of those with a short explanation of each one.

AMRAAM

Starting with the AMRAAM, the request is for $432.4 million in procurement and $101.4 million in R&D. We hope to procure 90 missiles this year and some 505 next year.

As you know, the program is under extensive review at the Department and Dr. Cooper will comment on that when I finish, so I won't belabor that point at this point in time.

SPARROW

The other missile that we have that we categorize as a radar missile is the Sparrow. The R&D is completed on that and both the Navy and the Air Force are procuring it. Our request this year is for 425 missiles. We bought some 404 last year and next year we will be buying a similar amount.

SIDEWINDER

The third air-to-air missile is the Sidewinder, a heat-seeking infrared missile. The request this year for $43 million is for 800 missiles. We plan to buy similar amounts in the following year.

MAVERICK

In the air-to-surface arena, the Maverick missile, which is the AGM-65D, is currently in production. Our request is for 3,500 of these missiles. As you know, we have had some quality problems at Hughes Aircraft and they stopped the production for a while and we fixed those quality problems.

We are now receiving missiles off the production line, but we are about 5 months behind schedule. Our current estimate is that we will be back on schedule around October of this year.

We have just completed highly successful OT&E on the Maverick missiles. So, we are pleased with the performance of the missile itself.

HARM

The HARM missile is an antiradiation missile for air-to-surface, the Navy is the lead Service on the HARM. I will allow them to expand on it. Our request is for 1,715 missiles at a cost of $478 million.

We have had some recent difficulties in the test firings of the HARM. I think my Navy counterpart is up to speed and will be prepared to discuss that. We are in low rate intitial production. We are putting out about 30 a month.

AGM-130

The third one in the air-to-surface arena is the powered GNU-15 which we call the AGM-130. The request this year is for $48.5 million to start production. The AGM-130 is in the test program. We should complete the tests by next summer. We would plan on starting production sometime in the third quarter of 1986.

GROUND-LAUNCHED CRUISE MISSILE

The only nuclear missile that we have is the ground-launched cruise missile which is currently being bedded down in the European theater. The request this year is for 95 missiles. Next year we will buy 76 and that will complete the buy of ground-launched cruise missiles. As you recall, the total number procured will be 560.

MOM-107 DRONE

Under the "Other" column we have two items, the target drone. These are the different types of drones. We actually have three types in the request that we use for targets. The vast majority of them are the MOM-107 which is a drone that both the Army and the Air Force use and also the QF-100 which is the modified F-100 airplane and fulll-scale drone.

RAPIER DRONE

In the Rapier line we are asking for $7.5 million to continue to fund the 32 fire units that we have agreed with the United Kingdom to bed down in the United Kingdom. As you recall, this is where we buy the missiles and the United Kingdom provides the manpower to man them during peacetime and also during the war.

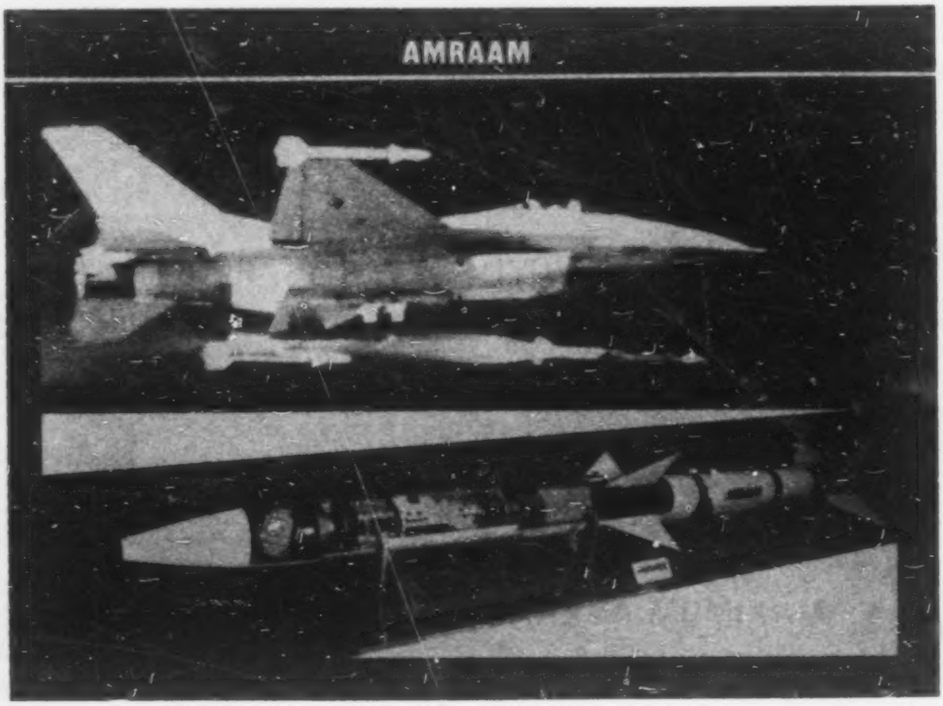
I would like to now turn it over to Dr. Cooper and let him expound a little bit on the AMRAAM.

AMRAAM PROGRAM

Dr. Cooper. Mr. Chairman, I thought it might be worthwhile to take a couple of minutes and bring you up to speed on where we are on the AMRAAM Program.

I thought it might be helpful to give the committee a little better feeling for what it is we are developing in the AMRAAM Program.

Could I have the first slide?



AMRAAM

Slide 1

AMRAAM CHARACTERISTICS

Dr. Cooper. The AMRAAM is the next generation radar-guided missile that will go on our F-15 and F-16 aircraft as well as on the Navy F-14 and F-18 aircraft and hopefully at some point in the future will also go on several European aircraft.

This is a one-quarter scale model of the AMRAAM. In actual size it is 12 feet long, which is the same length as the Sparrow, but unlike the Sparrow, which is our current generation radar-guided missile, the AMRAAM is 7 inches in diameter, whereas, the Sparrow is 8 inches in diameter. That translates to a significant differential.

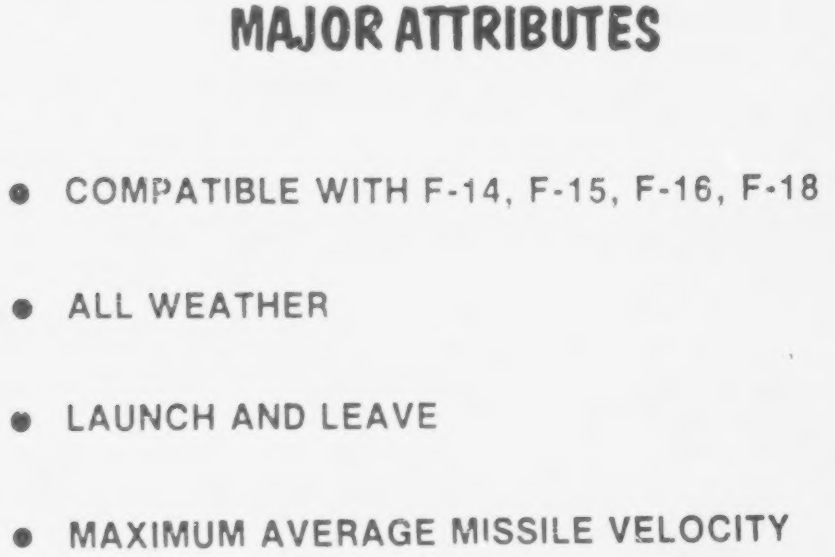
The Sparrow missile today weights 510 pounds, I believe. The AMRAAM is being designed to weigh 335 pounds. The significance of that is that that will allow the AMRAAM missile to go on the F-16 aircraft, and there you see our first test firing back on December 7 of an AMRAAM from an F-16.

Today the F-16 does not carry a radar-guided missile. The business end of the AMRAAM will contain an active radar section that heretofore has had to be carried in the aircraft itself.

The technical challenge with this missile is in trying to design a complete radar that cannot only receive, but also transmit, and still will fit into a 7-inch cavity.

We have one missile in the inventory today that has a complete radar in the front end and that is the Phoenix missile. It is 12 inches in diameter and weighs in excess of 1,000 pounds, far too big to go on our fighter aircraft. That is the technical challenge we face.

Let me talk a little bit about the other features of the AMRAAM.



MAJOR ATTRIBUTES

- COMPATIBLE WITH F-14, F-15, F-16, F-18
- ALL WEATHER
- LAUNCH AND LEAVE
- MAXIMUM AVERAGE MISSILE VELOCITY

SLIDE 2

AMRAAM FEATURES

Dr. COOPER. It is being designed to be compatible with both our fighters as well as the Navy F-14 and F-18 and also fighter aircraft of our NATO allies. The Sparrow is all weather, but unlike the Sparrow, the AMRAAM will have a launch-and-leave capability which means the pilot can fire the missile, the missile then will acquire the target itself, illuminate the target with the transmitter that is in the front end, and lock onto it. This will free the pilot then to leave and go about his business.

That translates to a greatly increased survivability. The missile then is able to autonomously guide and home in on the enemy aircraft.

The other feature of the AMRAAM that differentiates it from the Sparrow is that it is a much faster missile than the Sparrow which means the time between when the pilot launches and when it impacts the target is less. That also is very desirable from a survivability point of view.

MISSILE COSTS

I mentioned to you during our last testimony that we believe the Air Force program for 17,000 missiles can be acquired for $7.5 billion in then-year dollars. That translates to $5.2 billion in 1984 dollars.

That is not a small amount of money and it has been the subject of some intense review over the last 6 months because we had hoped that we could bring the program in for something less than that.

In fact, if you go back to the December 1983 SAR, you will see a number of $5.7 billion for 17,000 missiles. That now compares with the $7.5 billion. There has been some cost growth in the program and that has been of extreme concern to Secretary Weinberger.

He put me in charge of a cost reduction effort to see if we could bring the cost down. That cost had at one point gone to $8.4 billion. The result of that almost 4-month effort is the $7.5 billion program we bring you today.

That number has been achieved by stressing three primary areas, producibility, for instance, using robotics, ways to more efficiently produce the current design, some minor design changes that will lead to cost reduction in the technical area, and also some hard looks at the management techniques we are using, particularly in the way we are going to logistically support this missile and in the way we acquire the warranties.

Those have all led to the $7.5 billion program. Mr. Weinberger has accepted that, but I need to tell you that we have yet to receive a decision memorandum out of the Office of the Secretary of Defense. That is in the works. He has not yet finished dotting the "i's" and crossing the "t's," but I think I can safely tell you that Secretary Weinberger has made the decision to go forward with the AMRAAM program. That is good news for us.

I was not quite so confident in January. As I mentioned to you last time, he was not happy with the $8.4 billion program. But, again, I would like to put this in context.

If you look at the amount of F-15 and F-16 assets that we will have bought and paid for by the year 1990, about the time when this really starts entering the inventory, we will have about $100 billion worth of F-15 and F-16 aircraft alone on the ramp.

So, the AMRAAM Program represents roughly a 7 to 8 percent investment to greatly leverage that force. What this missile will give us is a first look, first shoot, hopefully first and last kill on the enemy. We can't afford to let our tactical Air Force and Navy get in a position where the enemy has first look, first shoot. We believe that through the 1990's this will preserve that option.

Mr. Chairman, that is about the long and short of it. That brings you up to speed on where we are right now.

IFF

Senator STEVENS. Can you fill us in also on the way this dovetails with the new IFF?

It is my understanding that having this advantage of all weather, all hours, and tremendous distance you have with the radar missile, if you don't have the IFF in place, you are going to be shooting down your own birds unless you can identify them at a great distance.

Isn't that right?

Dr. COOPER. Let me say, Mr. Chairman, obviously we need a good identification friend or foe capability. That is another effort that we are very actively working on.

I would remind the committee once more in terms of numbers, this missile will not come into the inventory until the 1990's. We recently reached an agreement with the Germans, along with the British, and French on an IFF approach, the MK-15.

So, you are exactly right, we would like to have a good IFF in place at the time this enters the inventory.

MK-15

Senator STEVENS. What is the timeframe for the MK-15?

Dr. COOPER. Hopefully roughly the same timeframe. We have other ways of identifying friend and foe right now, but they are not as sophisticated as we would like.

Senator STEVENS. They are rather sophisticated. But are they not always going to be there for fighter aircraft?

General RUSS. We have several methods now in development and being introduced into the fleet that enable us to identify enemy aircraft.

The classification won't allow me to get into it at this point in time, but those modifications are funded in our first airplanes and will be introduced.

Senator STEVENS. I have been an advocate of this. I think people who are familiar with the problems of pilots have been because it gives you a chance to leave the scene and also to have multiple launches before you leave.

Dr. COOPER. That is exactly right.

PER COPY MISSILE COSTS

Senator STEVENS. It is extremely important. I think this is more than a quantum leap forward to have it. But my staff tells me that even at your reduced cost, we are talking about three-quarters of $1 million a piece and the Sparrow is $190,000.

The problem is whether we can really justify the cost gap in these two weapon systems.

Dr. COOPER. Mr. Chairman, I would like to put to bed the three-quarters of $1 million dollars apiece objection. Let me give you the numbers of AMRAAM that would relate to the $7.5 billion program.

In 1978 dollars, and those are the base-year dollars, the SAR dollars we work with, that translates to $216,000 a copy.

Senator **Stevens**. What is that now?

Dr. **Cooper**. In base-year dollars, fiscal 1978 dollars, and those are the SAR baseline numbers, the selected acquisition report baseline numbers, it is $216,000 a copy. That is program average cost for the AMRAAM.

That is for the entire 17,000 missile buy. That is the average cost.

Senator **Stevens**. I always get lost in that. I am reminded, as I told you the other day, when I was gambling the dice table with Indian rupees, I never could figure out whether I was winning or losing.

You are dealing with 8-year-old dollars.

Dr. **Cooper**. Let me take it forward for you. In then-year dollars it is $495,000 a copy. That is over the entire buy, taking year by year.

Senator **Stevens**. It is average for each current year?

Dr. **Cooper**. Yes; and then averaged over the entire buy; $5.2 billion in 1984 dollars divided by 17,000. It is about $300,000 a copy. But to put it in context with the Sparrow, a good frame of reference is this missile we think will cost about twice what a Sparrow costs.

COST OF IMPROVED SPARROW

Senator **Stevens**. What would an improved Sparrow cost?

The House has zeroed this out and gone after the improved Sparrow. I was talking about the existing AIM-7M.

What does the improved Sparrow cost?

Dr. **Cooper**. Let me define the improved Sparrow, the one that will compete with AMRAAM.

The improved Sparrow would take the control from the center body—the Sparrow today is controlled by these fins, the ones that move—and go to what we call a tail control system.

AMRAAM today is tail controlled. That is a relatively modest change, not insignificant and perhaps not a bad change to make on the Sparrow at some point down the stream.

In addition, the improved Sparrow, that would compete with AMRAAM would have an active radar in the front end. Our best estimates are that it would come on line 2 years later than AMRAAM and probably cost about a half billion dollars more than AMRAAM.

That, however, would give you a launch-and-leave capability, and it would give us the active missile we are looking for, but it would continue to weigh in excess of 500 pounds and would not go on the F-16 aircraft.

So, it takes longer, costs more, and doesn't meet the requirement. That is the most attractive alternative if you are looking at replacing the AMRAAM with something that meets part of the requirement, but it does not fully meet the requirement.

It costs more and takes longer to field, so we don't think that is a good deal.

REPLACEMENT FOR AMRAAM

Senator STEVENS. The House thinks you have something up your sleeves if neither one of these things goes.

Do you have something else to take the place of both the AMRAAM and the improved Sparrow?

Dr. COOPER. We have nothing up our sleeve that will replace AMRAAM. If a decision is made, and we hope it will be, to go forward with AMRAAM, there are some very interesting things you can do with the AMRAAM airframe, Mr. Chairman, and I don't think I had better comment further in an open session on what those are, but they do not replace AMRAAM.

There is nothing that we have seen that we think would be more cost effectively that would cause us to cancel AMRAAM—nothing. You would have to either start a brand new program to meet this requirement or try to improve the Sparrow.

As I said, that would take longer, cost more, and would not fully meet the requirement, because you have a 500-pound missile which will not go on the F-16.

AMRAAM RELATION TO F-15 AND ASAT

Senator STEVENS. Is AMRAAM related to the F-15 at all?

Dr. COOPER. Absolutely. It will be the missile for the F-15 in the 1990's.

Senator STEVENS. How about ASAT?

Dr. COOPER. It is not related to the ASAT. ASAT uses a combination of SRAM and ALTAIR boosters to get it up to the altitude we need it to go to. This would not have the power.

COST REDUCTIONS

Senator STEVENS. You did say that your study has led to a reduction in cost now to $7.5 billion?

Dr. COOPER. That is our best estimate.

Senator STEVENS. You are waiting for signoff by the Secretary?

Dr. COOPER. We are waiting for Mr. Weinberger to give us a formal decision.

Senator STEVENS. What changes did you have to make to get the cost down?

Dr. COOPER. There is no one change that makes a dramatic change in cost. There are probably on the order of 20 to 30 small changes we would make.

As a couple of examples, there are four batteries right now in the tail section. The group looked at this, and they have concluded that we can take one of those four batteries out and live with three batteries.

Another change is currently we have hybrid printed circuit boards, and we think at about the third or fourth production lot we can go to large-scale integrated circuits.

All of these things lead to cost reductions on the order of 1 percent or even a fraction of a percent. So, it is the summation of many things that has allowed us to bring the cost down.

A couple other examples, Mr. Chairman, are that we believe that it will be better in the near term to continue to support this missile with a contractor logistical support team as opposed to going to one of our air logistics centers.

The way you save money there is that you don't have to buy special test equipment to put in an air logistics center. You can use the special test equipment that the contractor already has in place.

We also think we can reduce the cost of the warranties.

So, there are a number of things, but there is no one thing that gives you a large decrease in cost, however.

AMRAAM FLIGHTS

Senator STEVENS. Last year you told the committee that there would be six flights of the AMRAAM before you would go into the first production lot. I am told that has not been done, that you do intend to go into production.

Dr. COOPER. We have not made a decision to go into production. We have a set of criteria that we will use——

Senator STEVENS. Have you done the six flights?

Dr. COOPER. No, sir. We have had one flight. We hopefully will get a flight off today.

I need to inform the committee that I am not quite sure where we said we would have six flights. That is not one of the formal criteria for going into production, to go into long lead procurement.

The earliest that we could go into long lead would probably be in the July-August timeframe, and we are not looking to actually entering production until sometime next year. However, I would anticipate that we will have six flights on the books by the time we make a decision to actually go into production.

Senator STEVENS. I have used up my time.

SPARROW MODERNIZATION

Apparently the House has decided that rather than delay the AMRAAM at its current stage of production, it would be better to encourage the modernization of the Sparrow and to incur the contractor cost to keep the AMRAAM alive during this period of low funding.

What is wrong with that?

Dr. COOPER. Mr. Chairman, I am not quite sure what you mean by modernization of the Sparrow. I have not seen the House proposal.

Senator STEVENS. We are told that they opted for an improved Sparrow, as I said.

Dr. COOPER. If the improved Sparrow is one with an active seeker and tail control——

Senator STEVENS. That is what it is.

Dr. COOPER. The problem with that is it costs more, it does not meet the requirement, and it will take at least 2 years longer to bring on line as compared to the AMRAAM.

Senator STEVENS. It will be 2 years before we can fit in the money for either in view of the reduced budget. I think you would have to tell us for our records what would be the additional development-related cost the contractor would have to absorb to keep the program alive if we did delay production on AMRAAM so that we can take a look to see what they are talking about.

Could you give us that for the record?

Dr. Cooper. We could. Zero production funds in 1986 and what will the impact be.

Senator Stevens. Yes, you still have the zero funds. What will be the increased cost?

Dr. Cooper. We will take that back and provide an answer for the record.

[The information follows:]

Modernized Sparrow

Zeroing the FY 86 AMRAAM missile procurement funds would delay the start of production by one year. While the full scale development [FSD] program would be able to continue during that period given that the FY 86 RDT&E funds are appropriated, there would be a "gap" created between the production of the FSD missiles and the first production lot. To avoid the high costs of restarting the production line and the requalification of vendors, it would be necessary to fill the "gap" with additional RDT&E missiles. If Hughes delivers to their internal schedule of 63 months, a nine-month gap would have to be filled. Since the government would be responsible for the delay in production, we could not expect Hughes to bear the costs of building additional missiles. Therefore, the Air Force would need approximately $80 million in RDT&E funds to buy 36 additional AMRAAM missiles. This is based on a minimum of four missiles per month required to bridge the FSD to production "gap". This extremely low quantity is responsible for the premium price for the missiles.

In addition, there would be additional costs in the production program due to a one-year delay. Assuming that the Air Force could retain and use the already appropriated FY 84 and 85 AMRAAM missiles procurement funds ($131 million) and advance buy funds were appropriated in FY 86 for a FY 87 production start, the production program cost would increase by at least $400 million due to inflation effects alone. Without the advance buy and prior year funds, the program would slip by two years with significantly greater cost impacts than stated above. Finally, significant delays in fielding the critical AMRAAM capability would put the US and its NATO Allies in a difficult position should we have to go to war.

BUDGET EFFECTS ON AMRAAM

Senator Stevens. Senator Stennis.

Senator Stennis. Mr. Chairman, I am going to be quite brief. I am not capable of making any judgment or conclusion here between missiles.

In my efforts and work during the last 2 to 3 years on the deficit I have learned a good deal about the attitudes of the people and how we can systematically get rid of it and get back to something that is safe and sound.

There have been disclosures involving small amounts of money, but it does not show up well for the military about how they spend the money. This is not directed to any individual—in uniform or the civilian.

I have voted for the money. I haven't voted against a major weapon, a major sum of money in the military in a long time. But we see it reflected in the judgments that have been made in the budget resolution the other night.

I am told that this missile in question has tripled in cost since its inception, and that the House did not fund the missile.

Is that right? Did they take the AMRAAM out of the bill altogether?

Dr. Cooper. The House has proposed that the program be terminated.

Senator STENNIS. They know a lot about that business. I don't take lightly what they have done. I hope they are mistaken. It is not going to be as easy to get military money, especially in the field of the unknown, experimental, looking out in the future.

COST TRIPLING OF MISSILE

Dr. COOPER. Mr. Chairman, I would like to comment on your point about the missile cost tripling.

I think the best way to take that on is right up front and say back in the late 1970's the costs that were projected for AMRAAM were horribly optimistic. We have known that now for 3 years.

In fact, I think for the last 3 years we have told you that the cost was going to be on the order of $200,000 a copy in fiscal year 1978 dollars. To put that into context, the first estimate, applies to apples, was $90,000 a copy.

So, I think, two to one is a better estimate. We have known for the last 3 years that it is going to be more on the order of $200,000 a copy, and the reason for that is that when we got into the acutal full-scale development, we realized what the challenge was.

I think it does little good to go back to 1977 and say your estimate was so much then. We are where we are. I can only reinforce that this missile is at the heart of our tactical Air Force. It does little good to have $100 billion worth of aircraft on the ramps, I call them "shiny bows," and not have the arrows to put in them to go to war if you have to.

This is the killing end of our tactical Air Force. I can't stress enough how important it is to have a radar-guided missile that can meet the threat in the 1990's. We had a long hearing last week on our tactical aircraft program, and as much as I am for buying aircraft, I have to tell you I wouldn't want to buy additional aircraft if we don't have munitions to put on them. That doesn't make any sense at all. That is the issue that we are trying to stress.

Senator STENNIS. I realize what you are saying but there has been a change. I mention that more as a warning. I am not trying to give you a lecture. You are not responsible for what others have done or failed to do, but I can feel it.

Dr. COOPER. I am responsible now, Senator.

Senator STENNIS. And I can make comparisons about sentiment. I will withhold judgment on this missile.

F-15E FUNDING

General RUSS. Senator Stennis, if I might add, the other day we discussed tactical aircraft and one of the things I mentioned was that the F-15E was our highest priority and we ought to fund our F-15E because it was our highest priority and we were willing to take that money from some other area that is of lesser importance.

If you ask me the same question on our tactical missile, I will tell you that the AMRAAM is the most important tactical weapon that we have. We recognize and fully appreciate the deficit and the problems that are confronting the country and the Congress.

In that light we would put our priority on the AMRAAM missile and be willing to take something less in some of the other programs to pay for that. But it means that much.

I do not want to see our pilots go out and fight a war—hopefully, they won't have to, but if they do get into a situation where they have to fight a war, I do not want to see them in a situation where the enemy has quantity, which he has today, and also has quality which he will have unless we produce this missile.

So, it concerns us very much that this weapon and this missile continue and we want to tell everybody we think it is the top program that we have in this area.

Senator STENNIS. Thank you very much.

Thank you, Mr. Chairman.

Senator STEVENS. Senator Rudman.

Senator RUDMAN. Thank you, Mr. Chairman.

AMRAAM RANGE

Mr. Chairman, I have to leave for another hearing. I regret it because I would like to hear the Navy's testimony, but I will have questions for the record after these questions.

I want to talk about two other aspects of the AMRAAM. Although it is classified, I guess it is fair to say that the range of AMRAAM is greatly enhanced over what?

Dr. COOPER. It is enhanced, that is true.

Senator RUDMAN. By a considerable amount?

Dr. COOPER. Range plus speed, a combination of the two which is time to target.

Senator RUDMAN. Now, this particular missile, this air-to-air missile, has two kinds of electronics in it, as I understand it.

[Deleted.]

Dr. COOPER. I think we need to go into a higher level of classification.

ACTIVITY IN ELECTRONICS ENVIRONMENT

Senator RUDMAN. My question is how much effort is going into the possible electronics environment it is going to operate in, because I don't disagree with General Russ or yourself in terms of its priorities.

I, for one, think it would be a mistake. There are two mistakes you make, in my view. The number one mistake would be to give up on this program, but the larger mistake would be to continue the program without paying enough attention to the environment it is going to operate in in 1990 and 1992.

We can spend this \$5½ to \$6 billion and with what I know about our ECCM efforts, I would have to assume that the Soviets are not asleep at the switch. I would like you to address that to the extent you can in open session and to the extent you cannot, I will talk to you privately.

Dr. COOPER. I do think we should have a private session on that.

ELECTRONICS COUNTER COUNTERMEASURES

Another point I probably should have made is that a key difference between the AMRAAM and the Sparrow is in the area of electronics counter countermeasures. That is also a tremendous challenge.

We will try to incorporate, to the extent we can, some of the same changes in Sparrows as well because they will be in our inventory for a long period of time. We have a very aggressive program in ECCM to counter all the known threats and those that we project in the future.

This is a cat and mouse game, and just as soon as somebody develops a countermeasure, we try to develop a counter countermeasure.

ECCM SPECIFICATIONS

Senator **Rudman**. In the HARM case they talk about wing flutter, the thing does not fly at supersonic speeds in certain cases.

What nobody has talked privately or publicly about is how far along are we with ECCM specifications that were developed and enhanced since the inception of this fleet?

How well is the development coming on that aspect of this missile and how well is it working?

Dr. **Cooper**. Of course, we are in the test program, Senator, and that will be stressed at that point.

Part of my effort to look at cost reduction was a revalidation of the requirements which included an update of the threat spectrum that we had to go against. That is being worked real time.

As long as this missile is in the inventory, it will continue to be worked real time. This will be handled by software changes and block improvements as we continue with the missile.

I would like to have Colonel Ferguson stop at your office and talk about that.

SPARROW MODIFICATION

Senator **Rudman**. I think that would be good. I ask the question because I am aware of the very significant differences between Sparrow. I think, Mr. Chairman, I would make an observation that when the House talks about going to a "modified Sparrow," I have locked into this. To modify the Sparrow to work within the environment that we are talking about and that we all understand, there is no way the Sparrow would ever cost less than the AMRAAM. In fact, my guess is that it will cost more.

The only other observation I would make, Secretary Cooper, is that it might be a blessing in disguise to hold off on some of this production money in the environment we are working in now for a variety of reasons.

Number one, it will, in my view, forestall making a wrong decision. I think the House decision is totally wrong, unrealistic and ignores facts that they really ought to know.

Number two, the fact is that I don't think you really have got your act together yet on all the technical parts of this and, frankly, a delay of 6 months or a year might be in your interest.

Dr. **Cooper**. We have already delayed 18 months. We were in hopes originally of going into production a year ago last February. We are just about at the 18-month point now in terms of delay, however, we believe in the next several months we will be in a position to release long lead.

Let me be candid with you, Senator, I want to see the AMRAAM go forward. I will leave that to your judgment on how much funds you provide. I am going to argue that you provide our request. Right now we are zero in the House. It is key to us that we keep the program going forward.

If I could make another point about Sparrow, and I missed it with Senator Stevens.

We have Hughes Aircraft on a fixed-price contract for the development at $556.7 million. We will enforce that contract. We have already provided them in excess of $500 million, and have less than $50 million to go with the contractor to finish the development.

Now, there are associated Government costs that go along with that. We do need R&D funds in addition to that to perform the test program.

We are also bringing Raytheon along as a second source and we hope by the third production option to have them fully qualified so that we can go head to head in competition. That is another way we are bounding the cost.

COMPLETION OF CURRENT TEST RESULTS

Senator RUDMAN. The current test results—I am running out of time—the current test results, when will they be completed, the current cycle?

Dr. COOPER. We have 31 months left in the test program and development program.

Senator RUDMAN. That is the problem I have. I am for AMRAAM, but I am not sure I want to go ahead as quickly as you want.

Dr. COOPER. We are building 17,000 missiles. The initial two production options are for less than 600 missiles to be split between two contractors. So, it is a miniscule amount.

Senator RUDMAN. It is still real money. I am not sure I buy that. As I said, I really think that we ought to continue with this, but maybe have a better cost estimate.

Let me ask you one other question which I think Chairman Stevens will probably find very useful and we all will in our discussions with the House on some warm summer night sometime that I will not look forward to.

MODIFIED SPARROW COSTS

I would like you to supply for the record in detail the best estimate you can put together of cost of a modified Sparrow including, and this is very important, including the upgraded ECCM and seeker that would be required for an upgraded Sparrow.

I would like those figures to be realistic. I don't want you to overstate them. I want you to give us your best possible estimate because I think that will be a very important piece of information that we will find useful.

Dr. COOPER. Let me flesh that out. I will give you the numbers because I just looked at them.

Senator RUDMAN. I only want it for the record.

Dr. COOPER. Two years longer.

Senator RUDMAN. Yes.

Dr. **Cooper**. And $300 to $500 million more.

Senator **Rudman**. I would like the detail and the backup, and the justification on the various components. If we have a shoot-out on this, I frankly would like to have something to work with.

Dr. **Cooper**. We appreciate the opportunity.

[The information follows:]

MODIFIED SPARROW

What follows is a rough estimate of what it would cost to develop an improved AIM-7 SPARROW with an active seeker, improved electronic counter-countermeasures, and better kinematic performance:

Then year dollars in millions

Improved AIM-7 development stages:	
AIM-7 Product Improvement Program [PIP]	70-80
[Deleted]	
China Lake and other laboratory support	50-70
Test assets and required support	90-12
Aircraft integration (class II mods and support) (F-15/F-16/F-18/F-14)	70-90
Total estimated cost	540-750

These figures include Navy estimates of development efforts for the AIM-7 PIP, tail control, and rocket motor as well as Air Force estimates for the remaining tasks based on AMRAAM experience.

This estimate highlights the fact that it would be much less costly to complete the AMRAAM development program ($177 million AF and $119 million Navy) than to start the new development described above. Also, the heavier AIM-7 would impose operational limits on the F-16 and the development time would delay the initial operational capability by at least two years over that planned for AMRRAM.

The cost of producing the two missiles is considered to be about the same.

These factors lead us to the conclusion that the baseline AMRAAM program with the cost reduction initiatives incorporated is the most cost effective and timely approach to meet the requirement for an air-to-air missile to meet the threat.

Senator **Rudman**. I regret leaving these hearings, Mr. Chairman, but this is one I have to leave.

Senator **Stevens**. Thank you very much, Senator. You have actually attended more of these hearings than I have.

Senator **Proxmire**. You both have been very diligent.

I have additional questions which I would ask to be put in the record. It is along the same line as the other questions you have had this morning. I am sure you are going to run into it.

We took action on the floor of the Senate, rightly or wrongly, to cap the national defense funds at $273 billion. This means it will be very difficult for us. We will have to eliminate some programs including some on the basis of simply being in trouble.

AMRAAM

Chairman Stevens and Senator Stennis and Senator Rudman have all asked questions on AMRAAM. I am going to do the same.

The House Armed Services Committee certainly does not have a reputation of being a foe of a strong defense. It is a committee that has been a very vigorous supporter of our defense effort. It has recommended killing AMRAAM. Let me ask you some questions about it.

Is it true, as the House Committee has said, that the AMRAAM program has slipped 2 years behind schedule?

Dr. COOPER. Yes; that is true, the full-scale development program is approximately 2 years behind schedule.

CANCELLATION OF AMRAAM PROGRAM

Senator PROXMIRE. Then why shouldn't the subcommittee seriously consider canceling the AMRAAM program and save $550 million in production money and $101 million in R&D money, given the fact that we have to put the program in priority to achieve the budget fiscal resolution directive at a zero year's growth?

Dr. COOPER. The response is that the requirement for an AMRAAM type missile does not go away, Senator, if you cancel this program.

As I mentioned before, we lament the fact that we have technical problems, but again, I would point out that it is a very challenging task that we have undertaken here to put a radar in a 7-inch cavity. I think just because we have fallen behind on our original schedule is not justification in and of itself to cancel the program.

The requirement will remain. We need an all-weather radar-guided missile that has a launch-and-leave capability that will go on the F-15 and F-16 aircraft along with our allies' aircraft and the Navy F-14 and F-18.

PRIORITY STATUS OF AMRAAM PROGRAM

Senator PROXMIRE. Why shouldn't we consider stretching out or canceling programs that are in trouble when we are in a position to have to pick and choose?

Doesn't it seem logical for us to proceed with the programs that do seem to be moving on schedule and moving as they were expected to, meeting their requirements?

Dr. COOPER. I will ask General Russ to comment further from a technical point of view, but I think you have to measure the priorities.

What General Russ has mentioned to you already is that this is about as high a priority program as we have in the Air Force right now.

ALTERNATIVES TO AMRAAM

Senator PROXMIRE. Before General Russ comments, let me ask this part of the question, too. You have made it very clear this is a high priority.

What other programs would you sacrifice in order to save AMRAAM?

General RUSS. Let me state first I believe it is proper if you have programs that are in difficulty to review them and see whether you need them and in some cases if they become too costly, we eliminate them just like we did the triple LGB.

However, when you do that, you must say to yourself, do we have an alternative? What is the alternative and how much does the alternative cost?

In the case of AMRAAM, when we went through that analysis, we found that we didn't have an alternative that was cost effective. Therefore, we believe that we need to continue the AMRAAM.

As far as the second part of your question, what would you give up to fund the AMRAAM?

In essence, I think the bottom line is that, we would be willing to give up parts of the weapons that we have shown on that slide to be able to fund that weapon.

Senator **Proxmire**. Specifically?

General **Russ**. We will be able to cut back some of the Maverick missiles we have to fund the AMRAAM.

Dr. **Cooper**. It would not come just out of our tactical missile account. That is a problem we face right now in putting together our 1987 budget, because our TOA has been cut back, it is not meeting what the original projections were.

Senator **Proxmire**. $102 million of research in addition to production.

Dr. **Cooper**. There is money——

CUTS IN RESEARCH AREA OF AMRAAM

Senator **Proxmire**. You have cut back on research.

Dr. **Cooper**. I don't think it would be wise to cut the research and development money at all because that would further wound the program.

Senator **Proxmire**. If you go ahead with the AMRAAM, what would you sacrifice in the research area?

Dr. **Cooper**. The point I am making is that it would not be restricted just to the tactical missile account. The entire Air Force account would sacrifice to pay for AMRAAM. It would come out of all our priorities, not just one.

Senator **Proxmire**. Obviously if you have to reduce them, reduce all roughly the same? Isn't there one or two or three that you could tell us now?

Dr. **Cooper**. As I mentioned, we are in the process of doing that in the 1987 budget preparation right now. AMRAAM will be funded, and it will be funded at the sacrifice of something else.

It is difficult for me to tell you any one program that is being canceled or changed to support this program. That is not the way our budget is put together.

Senator **Proxmire**. The difficulty is the way our budget is put together. If you don't do it, we will have to do it for you. I am sure we won't do it with the same skill and knowledge that you have. Any recommendation from you would be extremely helpful to us. We have to do it. The Budget Committee does not give us any choice.

Dr. **Cooper**. I guess I am not prepared to tell you one program we would cancel or change in favor of AMRAAM, but we certainly would be willing to trade for AMRAAM. No question about that. We would be willing to work with the staff to do that.

Senator **Proxmire**. Did the Air Force give the Senate Armed Services Committee a list of cuts that you would make to meet your budget?

Dr. **Cooper**. We did not. You mean in our latest mark?

Senator **Proxmire**. Yes, sir; in order to meet the requirements of the budget that you are operating under, the zero mark.

HIGH PRIORITY PROGRAMS

Dr. COOPER. Let me ask General Russ to comment, but what we gave the Senate was a list of high priority programs that we said we wanted to have protected in their mark and by omission, the others were offered up, if you will. But that was just a few programs.

Senator PROXMIRE. Will you give us a list of those that were offered up so that we will have those, too.

Dr. COOPER. We will.

Senator PROXMIRE. Thank you, Mr. Chairman.

Dr. COOPER. Again, to clarify, we did not offer up a list of programs to cut.

Senator PROXMIRE. That is what I want.

Dr. COOPER. We did not offer that to the Senate Armed Services Committee. What we gave them was a list at their request of very high priority programs, programs we wanted to see preserved.

Senator PROXMIRE. Will you give this committee that list?

Dr. COOPER. We will be happy to give the committee that list.

[The information follows:]

LIST OF HIGH PRIORITY PROGRAMS

Following the HASC mark-up of the FY 86 DOD budget request, the SASC staff requested a list of priority programs which in our opinion were severely impacted by the HASC proposed reductions. We provided the following list:

	Fiscal year request		HASC mark	
	Quantity	Amount	Quantity	Amount
Program:				
Amraam R&D		$101,382,000		
Amraam procurement	90	432,000,000		
B-1B R&D		367,438,000		$200,438,000
F-16 procurement	180	3,277,900,000	150	2,777,900,000
JSTARS R&D		260,221,000		
Space boosters (CELV) R&D		221,393,000		150,000,000
ICBM modernization R&D		1,580,000,000		1,308,000,000
ATF R&D		242,852,000		149,852,000
Lantirn procurement		420,700,000		378,800,000
F-15 procurement	48	2,079,300,000	42	1,807,700,000
Space defense systems (ASAT) R&D		149,900,000		101,700,000

SPARROW REQUIREMENT

Senator STEVENS. How many Sparrow's do you have now?

Dr. COOPER. While General Russ is looking for that answer, my recollection is that we have about 60 percent of our requirement for Sparrow's.

Senator STEVENS. You can give it for the record.

NUMBER OF SPARROWS

At the beginning of FY 1985 there were 3,929 AIM-7Fs in inventory, and 1,943 AIM-7Ms had been delivered. During FY 1985, an additional 1,347 AIM-7Ms will be delivered for a total of 3,317.

UPDATE AMRAAM PRODUCTION

Senator **Stevens**. Something has to give. Would it be possible to bring the AMRAAM into a closer time frame and stop building Sparrow's that will be replaced by AMRAAM in just 4 years.

Dr. **Cooper**. That was our original plan. As you may recall, we didn't request Sparrow's last year in our original budget request, because we were planning on phasing AMRAAM in sooner. As a result of AMRAAM having slipped 2 years, as a gap filler, we need to continue to buy Sparrow's.

Senator **Stevens**. Why? You are not shooting them at anybody.

Dr. **Cooper**. Hopefully we won't have to. If we did, we would need the munitions. It is a readiness issue.

Again, as I see it, to field aircraft without having munitions on them does not make good sense. Right now with the limited number we have, only about 60 percent of the requirement is in our inventory today for radar-guided missiles. We have a deficiency there.

Senator **Stevens**. It is going to be an awful tough budget to handle. As I understand it, Sparrow comes from somewhere around Lowell, MA, and AMRAAM comes from somewhere around Tucson. Those things enter into this picture, too, unfortunately.

We need to make sure what we are doing here in terms of capacity. I think we need to know what else is produced at Lowell and what else is produced in Tucson and see whether some of these things can be done without massive impact as far as unemployment is concerned and some of the judgments we have to make.

The House I notice cut $18.5 billion. We are told to cut $20 billion. That was an interesting thing. We have yet to see our good friends on the other side and see what they are going to do. That will be even more interesting.

HARM

Let me go to HARM. The Navy is coming along here soon and is going to tell us about their problems on the HARM, I hope, with regard to the F-18.

Have you had any experience in the Air Force with regard to separation problems in the use of HARM?

Dr. **Cooper**. No, we have had one recent failure. I believe there are five failures out of the last eight firings. Four of those occurred on Navy shots, and I believe one occurred on our shot.

Our shot was against a threat that we know we will have a tough time with, but it was not a flow field problem.

Senator **Stevens**. The House Armed Services Committee fenced 60 percent of HARM funds including yours.

What led them to include yours in that fence?

Dr. **Cooper**. Of course, HARM is being produced on one production line right now. The reason the funds were fenced, as I understand it, is that Mr. Paisley, my counterpart in the Navy, and I have agreed to tear down a HARM missile. That is now in progress. We believe it will take on the order of 90 days.

We are looking at, some changes which have occurred to the HARM missile over the past few months, both in the area of hardware and software. We want to make sure in the quality sense and in the hardware sense that that design hasn't changed so as to cause a problem.

We also want to document the hardware changes, and ensure that they have been included in the technical data package.

We also want to look at the software to make sure that has been adequately documented.

The House committee has told us that once we do, that and if we give the missile a clean bill of health, they will remove the fence on the funds.

I personally think that is a good idea, Mr. Chairman, to tear it down even if there aren't problems. We tore down a Maverick missile, the Navy tore down a Phoenix missile and the Army tore down a TOW missile at the Hughes' facility, and we found problems.

If for no other reasons, I think it is a good deterrent to relaxing standards if we occasionally tear down a missile. So, I am in full support of the tear down. We believe in the next 3 months we will have the results back.

CIRCUITBOARD ASSEMBLY ON MAVERICK

Senator STEVENS. The GAO tells us that the circuitboard assembly area of the Maverick produces some real problems and there have been no significant improvements in the hardware defect rate and that will be reflected in deliveries this summer.

You have a budget request for $489 million for 3,500, about a one-third increase over the last year, and that this increase will also establish Raytheon as the second source.

We are told that the defect rate in the Maverick subassembly area continues to be not good in your last reporting period.

Dr. COOPER. That is correct, Mr. Chairman.

Senator STEVENS. You shut down Hughes' Maverick production because of this quality control program?

Dr. COOPER. In August of last year we shut them down. We will not turn them on full rate until they have corrected the problems. We were in hopes of being able to start ramping up that line in March of this year. We have not met that schedule.

I believe we took delivery of 13 missiles in March, and we have yet to take delivery of any missiles in April because of the defects you mentioned. We continue to have problems in the circuitboard area.

Senator STEVENS. If that is the case, assuming you have money in here for 1985, why do you need one-third more for 1986?

Dr. COOPER. Of course when you mentioned the 3,500 missiles, 800 of those go to Raytheon, which is the second source. That leaves 2,700 for Hughes. We have 2,600 for Hughes in 1985. So it really does not represent a significant ramp up.

We are very hopeful that we are going to cure the problems that we have with the Maverick at the Hughes' facility. We continue to believe that. I don't see any show-stoppers. It is just that we do not have enough confidence at this point to start to ramp up, however, I believe that line will start to ramp up here in the not too distant future.

Senator **Stevens**. Does that little object in front of you come from Hughes?

Dr. **Cooper**. That is another reason we want to make darn sure they correct the problem in the facility at Tucson.

Senator **Stevens**. You have 36 months of accumulated funds for Maverick already?

Dr. **Cooper**. That is true.

Senator **Stevens**. You are a good witness, Doctor. I think you can help us with some of these road maps. It is pretty obvious we are going to need that.

Dr. **Cooper**. Mr. Chairman, I want to underscore again that we have not ramped up the line yet. The 1986 funds will not go on contract until sometime in 1986. We are still in 1985 at this point. We are a month or two behind where we would like to be, but I am hopeful we will be able to ramp up that line soon. We have had it closed down for all practical purposes for about the last 7 months while they have brought on a new work force.

LOW-LEVEL LASER-GUIDED BOMB

Senator **Stevens**. We are at the end of the hour. We have one last question about the low level laser-guided bomb. Secretary Orr notified us he was going to cancel that after 1985 because of cost growth and that $103 million budgeted for production for 1986 would not be needed.

We note that there is an authorization in the Senate Armed Services for $53.7 million for an unsolicited multiyear proposal for the system from Texas Instruments.

Does this indicate to us that you have notified the Senate Armed Services Committee of a change in your position and plans that we have not been told about?

Dr. **Cooper**. To the contrary, Mr. Chairman, we do not support funding for the low level laser-guided bomb in fiscal 1986, particularly in this budget climate.

Senator **Stevens**. Senator Stennis, do you have any more questions of the Air Force?

Senator **Stennis**. No more questions, thank you.

Senator **Stevens**. We thank you both. We appreciate you coming back.

Dr. **Cooper**. Thank you, Mr. Chairman and Senator Stennis.

DEPARTMENT OF THE NAVY

STATEMENTS OF:

REAR ADM. DAVID ALTWEGG, U.S. NAVY, ASSISTANT DEPUTY CHIEF OF NAVAL OPERATIONS (SURFACE WARFARE)

COMMODORE ROBERT J. KELLY, U.S. NAVY, DIRECTOR, TACTICAL AIR, SURFACE AND ELECTRONIC WARFARE DEVELOPMENT DIVISION, OFFICE OF THE CHIEF OF NAVAL OPERATIONS

INTRODUCTION OF WITNESSES

Senator STEVENS. Our next witnesses are Rear Admiral David Altwegg, U.S. Navy, Assistant Deputy Chief of Naval Operations (Surface Warfare), and Commodore Robert J. Kelly, U.S. Navy, Director, Tactical Air, Surface and Electronic Warfare Development Division, Office of the Chief of Naval Operations.

Gentlemen, we are placing your statements in the record. We welcome you here today and appreciate your waiting.

Admiral, is yours the first statement?

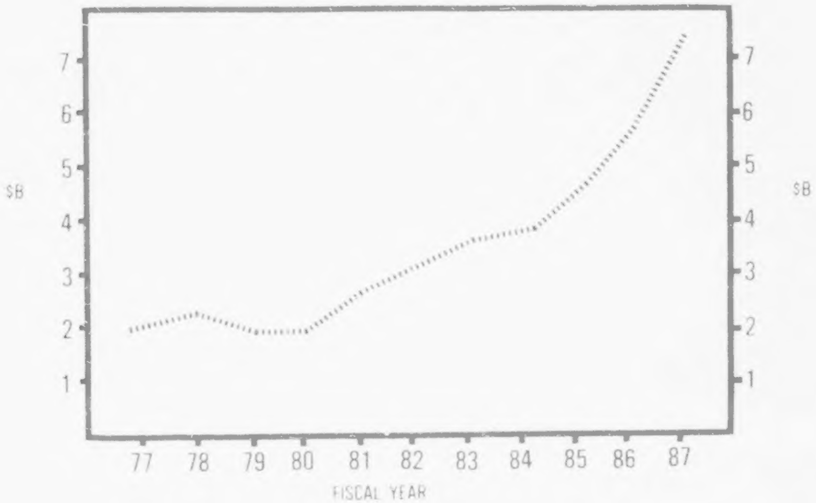
Admiral ALTWEGG. Yes, sir.

Mr. Chairman and distinguished members of the subcommittee, it is my privilege to appear before you to present the Navy's weapons procurement request for fiscal year 1986.

Accompanying me is Commodore Robert Kelly, who is prepared to respond to research, development, testing, and evaluation issues.

As you are well aware, Congress has made improved ordnance readiness and sustainability a top priority, and has backed that priority with markedly expanded funding in recent years.

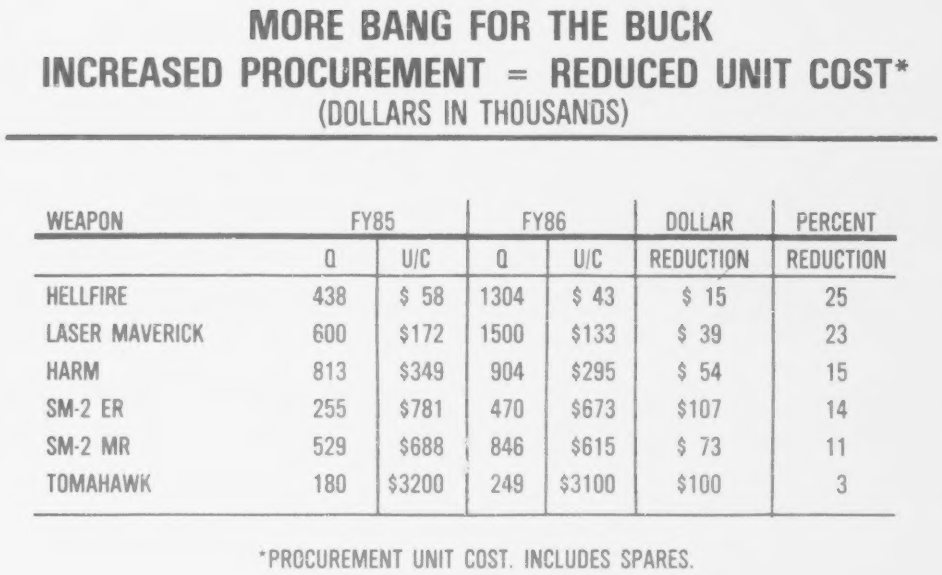
WPN FUNDING TREND (BUDGET DOLLARS)



VIEWGRAPH 1

FUNDING TREND

Admiral ALTWEGG. As this Viewgraph shows, the trend since 1981 contrasts sharply with the stagnation of funding evident from 1977 through 1980. The result has been a heartening growth of tactical weapons inventories as ordnance procured with fiscal year 1982 through 1984 funding is delivered to the fleet.



MORE BANG FOR THE BUCK
INCREASED PROCUREMENT = REDUCED UNIT COST*
(DOLLARS IN THOUSANDS)

WEAPON	FY85		FY86		DOLLAR	PERCENT
	Q	U/C	Q	U/C	REDUCTION	REDUCTION
HELLFIRE	438	$ 58	1304	$ 43	$ 15	25
LASER MAVERICK	600	$172	1500	$133	$ 39	23
HARM	813	$349	904	$295	$ 54	15
SM-2 ER	255	$781	470	$673	$107	14
SM-2 MR	529	$688	846	$615	$ 73	11
TOMAHAWK	180	$3200	249	$3100	$100	3

*PROCUREMENT UNIT COST. INCLUDES SPARES.

VIEWGRAPH 2

UNIT COST REDUCTIONS

Admiral ALTWEGG. Moreover, as shown in this viewgraph, the expanded production levels have led to dramatic reductions in unit costs of some of our most important weapons. Costs have come down because higher procurements enable primary contractors and their subcontractors to order supplies in economic lots and operate their facilities at efficient levels.

I think its important to note that the Navy is pursuing initiatives to get the most out of every dollar Congress appropriates. Let me discuss come examples.

WPN DUAL SOURCE PROCUREMENT

COMPETITION IN PROGRESS	COMPETITION PROJECTED
TOMAHAWK	PHOENIX
SPARROW	MK-48 ADCAP
SIDEWINDER	MK-50 ALWT
	RAM
	STANDARD
	VERTICAL LAUNCH ASROC

BENEFITS:

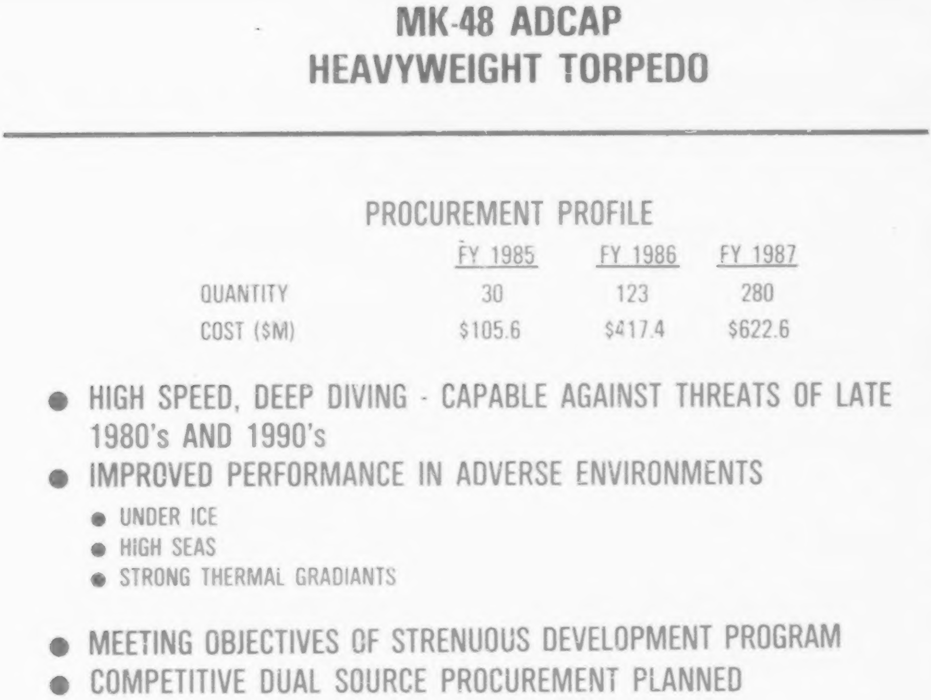
- BROADENED INDUSTRIAL BASE
- ACCELERATED INVENTORY BUILD-UP
- REDUCED UNIT COSTS
- PROTECTION FROM CONTRACTOR PERFORMANCE PROBLEMS

VIEWGRAPH 2

DUAL SOURCE PROCUREMENT

Admiral ALTWEGG. This year's WPN request emphasizes dual source procurement. As you know, we are already procuring Tomahawk, Sparrow and Sidewinder through competition. Our fiscal year 1986 request includes funds to develop competitive dual source procurement of Phoenix, Standard missile, RAM missile and MK-48 Adcap torpedo.

We plan to extend competition to other programs in the future. The benefits, both financial and military, are clear. The most salient are. More rapid attainment of adequate inventories, broadening of our production base for the complex weapons of today, the potential for reduced unit costs and the advantage of not having to rely on a single contractor.



MK-48 ADCAP
HEAVYWEIGHT TORPEDO

PROCUREMENT PROFILE

	FY 1985	FY 1986	FY 1987
QUANTITY	30	123	280
COST ($M)	$105.6	$417.4	$622.6

- HIGH SPEED, DEEP DIVING - CAPABLE AGAINST THREATS OF LATE 1980's AND 1990's
- IMPROVED PERFORMANCE IN ADVERSE ENVIRONMENTS
  - UNDER ICE
  - HIGH SEAS
  - STRONG THERMAL GRADIANTS
- MEETING OBJECTIVES OF STRENUOUS DEVELOPMENT PROGRAM
- COMPETITIVE DUAL SOURCE PROCUREMENT PLANNED

VIEWGRAPH 4

MK-48 ADCAP

Admiral ALTWEGG. I will outline our plans for two important programs. The first is MK-48 ADCAP heavyweight torpedo.

We plan to start fully competitive procurement in fiscal year 1988. To achieve that goal, we will select and begin qualification of a second prime contractor this year. We will then produce 12 qualification torpedoes in fiscal year 1986 and 50 directed production torpedoes in fiscal 1987 to be ready for competitive production in fiscal 1988.

PHOENIX (AIM-54C) AIR-TO-AIR MISSILE

PROCUREMENT PROFILE

	FY 1985	FY 1986	FY 1987
QUANTITY	265	265	420
COST ($M)	$338.4	$381.9	$520.3

- LONG RANGE AIR DEFENSE MISSILE FOR F-14
- PRODUCTION QUALITY ASSURANCE PROBLEMS RESOLVED:
  - CONTRACTOR QA PLAN IMPLEMENTED
  - RESUMPTION OF MISSILE ACCEPTANCE IN FEBRUARY 1985
- COMPETITIVE DUAL SOURCE PROCUREMENT PLANNED

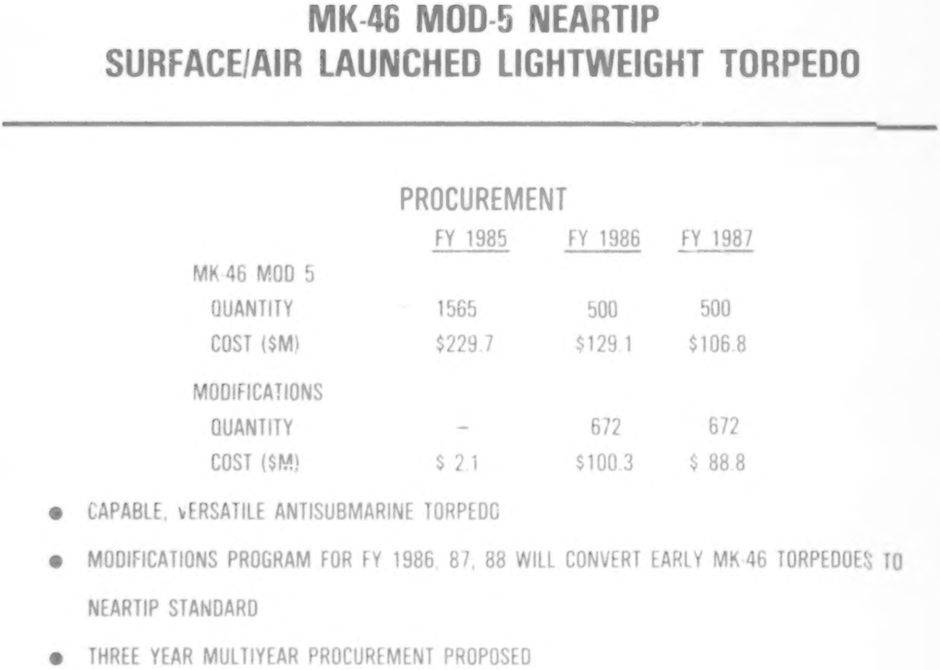
VIEWGRAPH 5

AIM-54C

Admiral ALTWEGG. A second major competition program is Phoenix air-to-air missile.

The acquisition strategy for Phoenix is to establish the new producer using a two-phased approach. Phase one contracts were awarded in April for two contractors to prepare technical data packages. The first phase will end with the selection of a second producer in 1986.

In phase two, this contractor will then fabricate directed production missiles in fiscal 1987 and 1988 to be ready for competition in fiscal 1989.



MK-46 MOD-5 NEARTIP
SURFACE/AIR LAUNCHED LIGHTWEIGHT TORPEDO

PROCUREMENT

	FY 1985	FY 1986	FY 1987
MK-46 MOD 5			
QUANTITY	1565	500	500
COST ($M)	$229.7	$129.1	$106.8
MODIFICATIONS			
QUANTITY	–	672	672
COST ($M)	$ 2.1	$100.3	$ 88.8

- CAPABLE, VERSATILE ANTISUBMARINE TORPEDO
- MODIFICATIONS PROGRAM FOR FY 1986, 87, 88 WILL CONVERT EARLY MK-46 TORPEDOES TO NEARTIP STANDARD
- THREE YEAR MULTIYEAR PROCUREMENT PROPOSED

VIEWGRAPH 6

MK-46 MOD 5

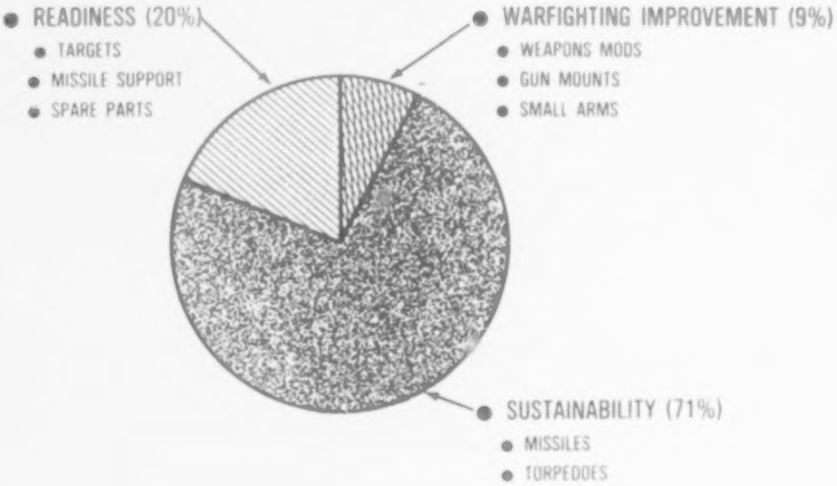
Admiral ALTWEGG. The MK-46 MOD-5 NEARTIP torpedo is the subject of a management initiative which has several objectives—both economic and military.

NEARTIP will remain an indispensible part of our inventory well into the 1990's. Accordingly, we are requesting 500 new torpedoes per year for the next 3 years.

We also plan to convert all remaining MK-45 MOD 1 and 2 versions to the NEARTIP configuration. We propose to combine acquisition of the new torpedoes and the modification program into a single 3-year multiyear procurement. This strategy will save the taxpayers over $51 million compared to three annual buys of the same size.

It will also improve our inventory position significantly. Finally, this level of production will ensure maintenance of our lightweight torpedo production base as we transition to the MK-50 Advanced Lightweight Torpedo.

BALANCE OF WPN REQUEST
FY 1986 TOTAL: $ 5.6 BILLION



VIEWGRAPH 7

FOUR PILLARS CONCEPT

Admiral ALTWEGG. Now I will concentrate on how the Navy intends to spend the money it is requesting to improve our warfighting capabilities. The most effective device to display our request is the "Four Pillars" concept. Simply put, we have segregated all Navy funding into four functional categories.

The force structure pillar addresses ships and aircraft.

Modernization, or as I call it, warfighting improvement, is funding to develop new systems or improvements to weapons in our current inventory.

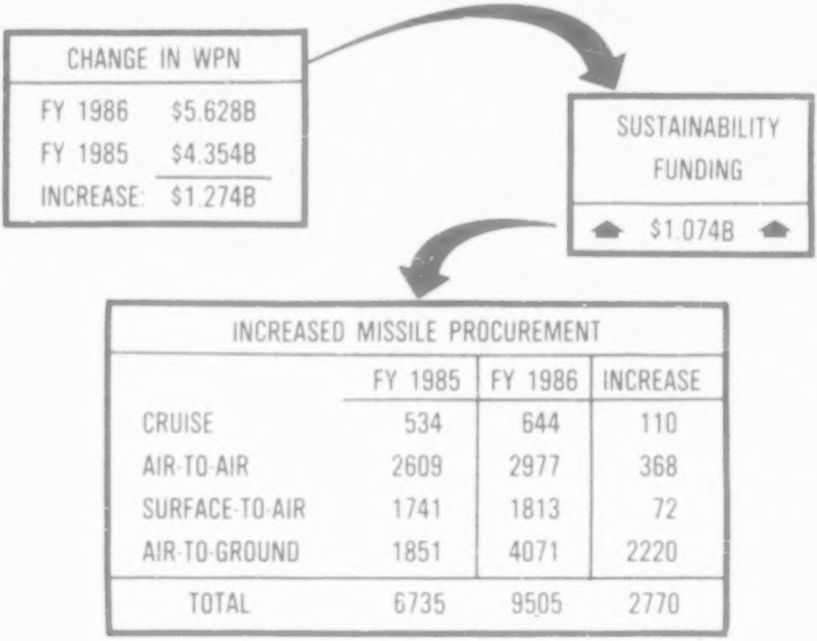
Readiness relates to training and maintenance of equipment.

Sustainability is procurement of the missiles, bullets, supplies and reserve components necessary to keep out combat forces going in a prolonged conflict.

The four pillars helps us evaluate the balance of our program between procurement for future capabilities and procurement for our current combat needs. Force structure and warfighting improvement are aimed at future improvements. Readiness and sustainability relate to the present.

As this diagram shows, the WPN appropriation is overwhelmingly oriented toward our capability to deter or destroy an enemy now. Over 91 percent goes to readiness and sustainability.

GROWTH IN SUSTAINABILITY



CHANGE IN WPN

FY 1986	$5.628B
FY 1985	$4.354B
INCREASE:	$1.274B

SUSTAINABILITY FUNDING

▲ $1.074B ▲

INCREASED MISSILE PROCUREMENT

	FY 1985	FY 1986	INCREASE
CRUISE	534	644	110
AIR-TO-AIR	2609	2977	368
SURFACE-TO-AIR	1741	1813	72
AIR-TO-GROUND	1851	4071	2220
TOTAL	6735	9505	2770

VIEWGRAPH 8

FUNDING GROWTH

Admiral ALTWEGG. As you can see here, the total increase in WPN from fiscal 1985 to 1986 is $1.27 billion. Of that amount, nearly $1.1 billion, or 85 percent, will go to enhancing our warfighting sustainability.

Moving to the lowest box in this Viewgraph, you can see that the growth in funding will procure almost 2,800 more missiles than in fiscal year 1985. Most of these additional weapons are the cruise and air-to-ground missiles which provide the primary offensive punch of our battle forces.

Simply put, the increase in this year's request is going directly toward enhancing the Navy's ability to deter any potential aggressor or, failing that objective, to terminate a conflict favorably.

We believe the Navy's fiscal year 1986 WPN request is balanced, affordable and properly constructed to meet the needs of the Navy and the Nation.

As stated earlier, Congress has funded increased ordnance procurement in recent years. As those weapons deliver, we are moving toward our essential sustainability and readiness objectives. This year's WPN request, in the mix of weapons and support funding presented, represents another vital step toward attainment of those objectives. Your support of this year's budget is crucial to maintaining the momentum we have established.

Thank you. I am ready to answer questions.

[The statement of Admiral Altwegg follows:]

PREPARED STATEMENT OF REAR ADM. D. M. ALTWEGG

ASSISTANT DEPUTY CHIEF OF NAVAL OPERATIONS (SURFACE WARFARE)

Mr. Chairman and distinguished members of the Subcommittee, it is my privilege to appear before you to present the Navy's Weapons Procurement (WPN) request for fiscal year 1986. My purpose is to provide you with information on the capabilities and characteristics of the weapons procured through this appro-priation, explain the funding requirements for associated support programs and discuss our plans for managing the acquisition of weapons systems.

I will start with the fundamentals. The mission of the Navy, as set forth in Title 10, U.S. Code, is to be prepared to conduct prompt and sustained operations at sea in support of the national interest. In meeting this mission, the first objective is the deterrence of any potential aggressor through advanced warfighting technology backed by the highest achievable operational readiness. If deterrence fails, the Navy must be ready to fight offensively for as long as necessary to destroy the enemy and terminate the conflict favorably. Finally, given the expanding threat of terrorism, the Navy must always be prepared to defend U.S. citizens as well as its own ships, personnel, and installations around the world from politically inspired violence. The ordnance procured through the WPN appropriation, when available in adequate quantities, provides the key to the fleet's ability to carry out these demanding requirements.

The fiscal year 1986 WPN request and the Five Year Defense Plan are designed to ensure that weapons inventories are adequate. This year's request is for $5.628 billion, which represents a 29% increase over last year's appropriation of $4.354 billion. In terms of real growth, the increase is 23 percent. This substantial growth reflects the Navy's commitment to match procurement of munitions to the 600 ship Navy and its worldwide responsibilities.

As you are well aware, Congress has made improved ordnance readiness and sustainability a top priority, and has backed that priority with markedly expanded funding in recent years. As can be seen in Figure 1, WPN funding has increased over 200 percent since 1981. This contrasts sharply with the stagnation of funding evident from 1977 through 1980. The result has been a heartening growth of weapons inventories as ordnance procured with fiscal year 1982 through 1985 funding is delivered to the fleet. Moreover, as shown in Figure 2, the expanded production levels have led to reductions in unit costs of some of our most important weapons. Costs have come down because higher procurements enable primary and subcontractors to order supplies in economic lots and operate their facilities at efficient levels.

The Navy's procurement policies emphasize plans to continue and accelerate the trend of more weapons for the money. In addition to increasing funding for ordnance, we intend to get the most out of every dollar appropriated through extensive use of multiyear contracts, competition, and rigorous oversight of budget execution. This year's WPN request includes funds to initiate competitive dual source procurement of PHOENIX, the MK-48 ADCAP torpedo, and RAM missile. It also includes a plan for multiyear procurement of the MK-46 MOD-5 torpedo.

Our determination to improve our management of procurement funding is demonstrated by a major change to the structure of the WPN appropriation. Traditionally the appropriation has consisted of four Budget Activities, each containing similar line items. These are:

- Activity One, Ballistic Missiles
- Activity Two, Tactical Missiles.
- Activity Three, Torpedoes and Related Equipment.
- Activity Four, Gun Systems and Small Arms.

FIGURE 1

WPN FUNDING TREND

(BUDGET DOLLARS)

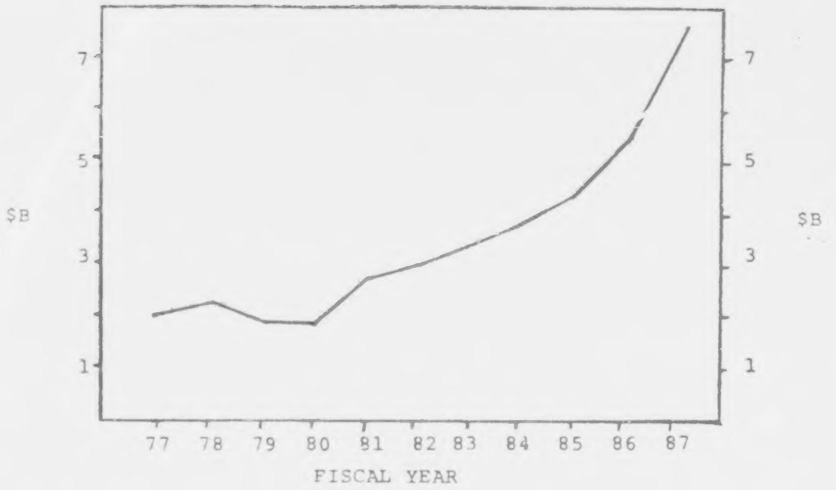


FIGURE 2

MORE BANG FOR THE BUCK

INCREASED PROCUREMENT = REDUCED UNIT COST*

(DOLLARS IN THOUSANDS)

WEAPON	FY85		FY86		DOLLAR	PERCENT
	Q	U/C	Q	U/C	REDUCTION	REDUCTION
HELLFIRE	438	$ 58	1304	$ 43	$ 15	25
LASER MAVERICK	600	$172	1500	$133	$ 39	23
HARM	813	$349	904	$295	$ 54	15
SM-2 ER	255	$780	470	$673	$107	14
SM-2 MR	529	$690	846	$615	$ 75	11
TOMAHAWK	180	$3200	249	$3100	$100	3

*Procurement unit cost. Includes spares.

This year these four budget activities have been retained, but a fifth activity, Spares and Repair Parts, has been added. This change is a mechanism to improve the management of spares procurement. Spares were formerly listed in the same budget activity as the end item with which they were associated. Segregation of all spares increases the visibility of related funding and procurement decisions. The result is a commensurate improvement in our ability to monitor determination of spares requirements during program development and more thoroughly evaluate performance during budget reviews.

Of immediate concern for our purposes here is how the Navy intends to spend the money it is requesting to improve warfighting capabilities. I have chosen to present the Navy's case for the funds we've requested by structuring my testimony around the "Four Pillars" concept. Let me explain. We say that there are four pillars, or supports, of the overall Navy program. These are Force Structure, Warfighting Improvement, Readiness and Sustainability. The four pillars help illustrate our balance between money for future capabilities (Force Structure, Warfighting Improvement) and money for present capabilities (Readiness, Sustainability). The first pillar, Force Structure, refers to acquisition of ships and aircraft. While we don't procure these items in the WPN account, we do pay close attention to the SCN and APN appropriations in determining the quantity of weapons necessary. WPN does fund a significant part of the Navy's second pillar, Warfighting Improvement. Warfighting Improvement is represented within WPN by the procurement of new gun mounts for existing ships and by funding of modifications to weapons already in our inventory. Readiness is concerned with training and the maintenance of equipment. In WPN, readiness funding procures antiair and antisubmarine targets, weapons range services, rework of weapons used in training exercises and spare parts.

While warfighting improvement and readiness funding are important parts of the WPN appropriation, the Sustainability Pillar is its heart. Ordnance sustainability is the adequacy of our weapons inventories to meet the requirements of combat. Put another way, sustainability is our staying power. Sustainability procurement is defined as the acquisition of ordnance, war reserve supplies and procurement in support of the naval reserve. Over 60 percent of sustainability funding is for ordnance.

Figure 3 presents the balance between readiness, warfighting improvement and sustainability within the WPN budget request. Warfighting improvement is 9 percent, readiness 20 percent and sustainability over 71 percent. For comparison, Figure 3A shows the proportion of the WPN appropriation within each of the five budget activities. In this more traditional display, you can see that 12 percent of the funding is related to strategic systems, 66 percent to tactical missiles, 14 percent to torpedoes and ASW systems and 5 percent to guns. The final 3 percent of the request is for spares.

Let's turn to the individual WPN items and discuss the Navy's fiscal year 1986 request in terms of the Four Pillars. In order to concentrate on major issues, I have provided summarized details of the funding request in a series of charts. The items are grouped by "Pillars" to help illustrate the use of the funding requested. Each chart shows the fiscal 1986 budget request and authorization items for fiscal year 1987. For purposes of comparison, the quantities of weapons and funds appropriated in fiscal year 1985 are also displayed.

SUSTAINABILITY PROCUREMENT

The initial focus is on our Sustainability Pillar. Figures 4 through 7 itemize the fiscal year 1986 budget request for missiles and torpedoes.

FIGURE 3

FOUR PILLARS BALANCE OF WPN REQUEST

(TOTAL: $5.6 BILLION)

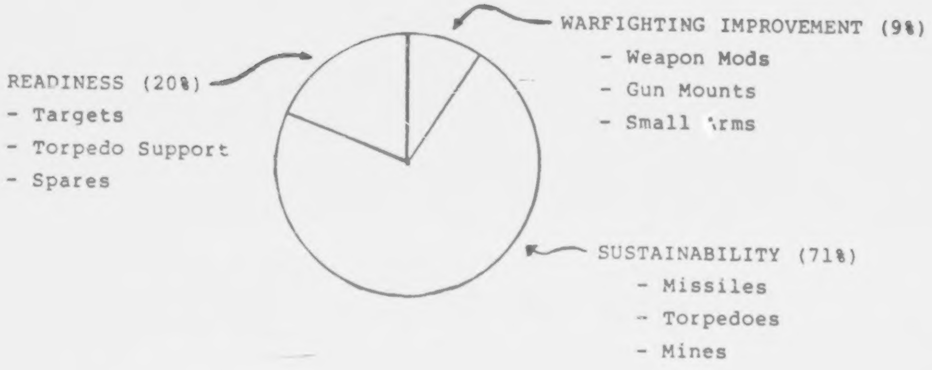
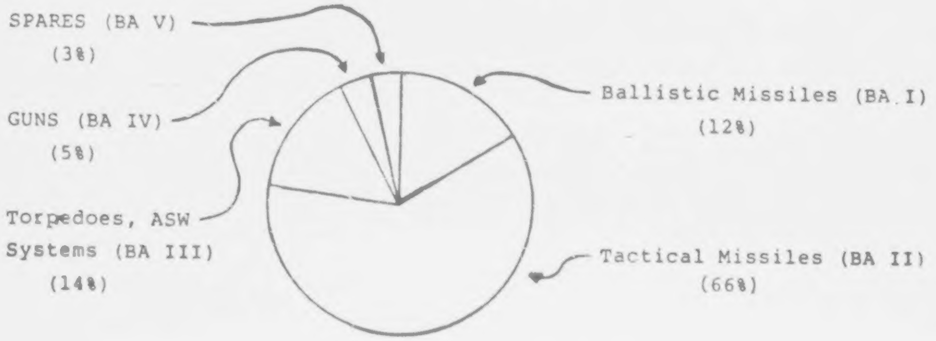


FIGURE 3A

WPN REQUEST BY BUDGET ACTIVITY

(TOTAL: $5.6 BILLION)



The submarine based strategic ballistic missile force is the cornerstone of the nation's nuclear deterrent and the most survivable element of the Strategic Triad. The introduction of TRIDENT II missiles will further enhance the credibility of the Triad through increased payload, range, and accuracy. The TRIDENT II, which will replace POSEIDON and TRIDENT I missiles, has a scheduled initial operational capability of 1989. It will be installed in all OHIO class submarines commencing with the ship funded in FY 1981 and will be backfitted in all earlier ships during their first overhaul. While the first procurement of missiles will be in FY 1987, this year's funding request (Figure 4) is essential to a timely production start and meeting initial operational capability. It consists of $269.3 million advance procurement funding for pre-production long lead and production continuity material and $312.7 million for procurement of reentry systems and production support.

Also shown in Figure 4 is the Navy's funding request for TOMAHAWK and HARPOON cruise missiles.

The TOMAHAWK Cruise Missile Weapons System is a family of exceptionally accurate, long range missiles consisting of nuclear land attack, conventional land attack and conventional anti-ship variants. With the deployment of this most significant weapon system in our battleships, cruisers, destroyers and submarines, the Navy will move from 14-15 strike platforms (aircraft carriers) to more than 175 offensive platforms. This expansion and distribution of the fleet's firepower will vastly complicate any enemy's targeting problem while providing battle group commanders with a wider range of strike options. Most importantly, the nuclear land attack TOMAHAWK provides the United States with a viable enhancement to our strategic deterrent force.

At the end of calendar year 1984 there were 14 TOMAHAWK platforms certified with an additional 14 scheduled to be certified in calendar year 1985.

TOMAHAWK missiles are procured through dual source competition, with General Dynamics, Convair Division, of San Diego, California and McDonnell Douglas Astronautics Company, of St. Louis, Missouri as the prime contractors. Under this competition we will be able to control procurement costs and maintain a high quality manufacturing capability for TOMAHAWK production in the years to come. Additionally, a broad production base is being established for increased production rates if required.

HARPOON is an exceptionally versatile anti-ship missile capable of launch from ships, submarines and aircraft. This hard hitting, radar guided weapon has shown a reliability of over 94 percent in tests and fleet exercises. Negotiations for the fiscal year 1984 HARPOON procurement contract resulted in ceiling prices for 1985 and 1986 which will significantly reduce the unit cost in fiscal 1985 and will allow the Navy to buy more missiles for the money in fiscal 1986.

Figure 5 provides a summary of our request for PHOENIX, SPARROW and SIDEWINDER air-to-air missiles. The Navy's fighter aircraft, using these missiles, provide the first line of defense of carrier battle groups. AIM-54C PHOENIX, teamed with the F-14 air defense fighter, represents an unmatched long range capability against high speed, high altitude targets and possesses the unique ability to conduct near-simultaneous multiple engagements against incoming aircraft. AIM-7M SPARROW is a versatile medium range missile used by both the F-14 and the F/A-18. Compared to its immediate predecessor (the AIM-7F), this variant of SPARROW incorporates a new low altitude active fuse and a target seeker featuring improved missile guidance performance in electronic countermeasures and clutter environments. Similarly, the AIM-9M SIDEWINDER, introduced in 1982, has a significantly

Figure 4

ORDNANCE SUSTAINABILITY PROCUREMENT: BALLISTIC AND CRUISE MISSILES

WEAPON	FY 1985 QUANTITY	FY 1985 COST	FY 1986 QUANTITY	FY 1986 COST	FY 1987 QUANTITY	FY 1987 COST	NOTES
TRIDENT II	-	162.9	-	582.0	27	1863.3	Increased range, payload accuracy compared to TRIDENT I. FY 1986 funding is for production planning, initial outfitting, re-entry system procurement.
TOMAHAWK	180	549.6	249	734.8	330	859.8	Anti-ship (TASM) and Nuclear land attack (TLAM-N) versions operational. Conventional Land Attack under development (TLAM-C). Launched from surface ships and submarines. TASM uses modified HARPOON guidance system. TLAM models use inertial and terrain matching guidance system. Competitive dual source procurement.
HARPOON	354	283.6	395	314.9	153	184.9	Ship, submarine, aircraft launched anti-ship cruise missile. Radar guidance system.

Figure 5

ORDNANCE SUSTAINABILITY PROCUREMENT: AIR-TO-AIR MISSILES

	FY 1985		FY 1986		FY 1987		
WEAPON	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	NOTES
PHOENIX (AIM-54C)	265	338.4	265	381.9	420	520.3	All weather, long range Semi-active, mid-course guidance. Specifically designed for F-14. "C" version in production since 1980.
SPARROW (AIM-7M)	1671	290.0	1872	368.7	1910	368.1	Semi-active guidance medium range. Used by F-14, F/A-18. Modified version, RIM-7M, used by surface ships in NATO Sea Sparrow point defense system.
SIDEWINDER (AIM-9M)	1000	68.5	1220	93.8	1168	89.0	Short range. Infrared seeker. Used on all fighters and many attack aircraft. Latest version includes improved anti-countermeasures capability and enhanced capability against targets in "IR cluttered" background.

improved infrared countermeasure capability compared to earlier versions. This missile, which equips all Navy fighters and tactical attack aircraft, is the Free World's premier short range dogfight missile.

PHOENIX related production problems at HUGHES Aircraft Co, Tucson plant have been widely publicized. Allow me to briefly summarize the history of the problem and the current situation. Quality assurance deficiencies were detected in early June 1984 as a result of a Navy initiated teardown inspection of a production PHOENIX missile. Follow-up inspections confirmed that the contractor's existing quality assurance system was inadequate, and the Navy stopped accepting PHOENIX missiles on 22 June. Subsequently, Hughes developed and executed a plantwide Corrective Action Plan which is fully acceptable to the Navy. Contractor performance is being monitored on the basis of quality assurance tracking indices developed by the Naval Material Command. Production rate increases will be tied to successful achievement of established thresholds. Delivery of missiles commenced in February 1985.

PHOENIX is unequivocally the most sophisticated and capable air to air missile in the world today. Because of its crucial contribution to fleet air defense and our low inventory posture, the Navy is planning to initiate competitive dual source procurement of PHOENIX by 1989. Accordingly, the fiscal year 1986 funding requested includes $92.9 million for qualification, missiles and engineering work necessary to support this effort. To further expedite this vital program, the Navy will request a fiscal year 1985 reprogramming action of $85.3 million to conduct the requisite engineering studies, select and initiate qualification of the second prime contractor and commence procurement of tooling hardware. This plan will result in directed production missiles from the second contractor in fiscal 1987 and 1988, with full competition commencing with the fiscal 1989 procurement.

As shown in Figure 6, the Navy procures five air-to-ground missiles through WPN funding. These weapons are critical to Navy and Marine Corps tactical aircraft in the performance of their combat attack missions, including anti-ship operations, ground support, defense suppression and interdiction missions.

In FY 1986, the Navy is requesting funds for two anti-radiation missiles. HARM is a High speed, Anti-Radiation Missile to destroy or suppress land and sea-based radars supporting enemy air defense systems. HARM began fleet service in 1984, and will be deployed on the A-7E, F/A-18, EA-6B and A-6E aircraft. It will correct the operational deficiencies prevalent in earlier anti-radiation missiles through increased speed, greater range, a low smoke motor, improved sensitivity, in-flight retargeting, and the frequency band coverage needed to counter the current threat. This is our initial request for SIDEWINDER Anti-Radiation Missile. SIDEARM is a short range, limited frequency band, anti-radiation missile being developed on an accelerated basis for employment on the Marine AH-1 helicopters to counter point defenses. Existing AIM-9C guidance and control sections will be modified to provide the missile's homing capability and the remainder of the missile will consist of current production SIDEWINDER components. Both HARM and SIDEARM will greatly enhance our ability to conduct tactical air missions effectively with reduced loss rates.

The Navy is requesting funding for two versions of the MAVERICK missile. LASER MAVERICK is an air-to-surface short range missile which will be used in the close air support/battlefield interdiction mission within the Amphibious Objective Area (AOA) and in deep support for the destruction of targets outside the AOA. The missile is a variant of the Air Force's TV MAVERICK modified to incorporate a semi-active laser seeker, a larger (300 lb. vs 125 lb.) general purpose blast/penetration warhead with a selectable delay time fuze, and a reduced smoke rocket motor. While planned primarily for Marine Corps use, it will be employed with a single rail launcher adaptable to both Navy and Marine Corps tactical aircraft. The second version, IIR MAVERICK

Figure 6

ORDNANCE SUSTAINABILITY PROCUREMENT: AIR-TO-GROUND MISSILES

	FY 1985		FY 1986		FY 1987		
WEAPON	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	NOTES
HARM (AGM-88A)	813	278.2	904	258.0	1177	297.7	Succeeds ARM, SHRIKE as primary anti-radiation, defense suppression missile. Increased velocity, greater range, improved sensitivity. Used by A-7E, F/A-18, A-6E aircraft.
SIDEARM	-	-	168	20.5	205	13.9	Short range anti-radiation missile. Converted from early SIDEWINDER missiles. Intended for MARINE CORPS AH-1 helicopters.
HELLFIRE	438	25.2	1304	55.1	1384	52.0	Semi-active, laser guided anti-armor weapon for Marine Corps AH-IT/J helicopters. Procured through Army.
LASER MAVERICK	600	103.0	1500	194.3	1800	209.8	Semi-active laser guidance. Penetrating, blast-fragmentation warhead. Used for close air support, battlefield interdiction.
IIR MAVERICK (AGM-65F)	-	-	195	27.8	419	54.9	Infrared seeker, optimized for ship targets. Warhead and fuse same as LASER MAVERICK. Will be used by A-6, A-7, F/A-18, AV-8B.

(AGM-65F) is an air-launched, direct attack weapon for day or night use against ship and land targets. The seeker is imaging infrared, similar to the Air Force IIR MAVERICK. It incorperates the same warhead and reduced smoke motor used in LASER MAVERICK. This missile will be fired from the A-7, F/A-18, A-6, and AV-8B aircraft.

The final air-to-ground missile is HELLFIRE, which will be used on USMC AH-1 helicopters as an anti-armor weapon. This semi-active, laser guided missile is procured through the Army. Its laser fire control system allows increased aircraft maneuverability during the attack phase with the result that a flight path can be used which minimizes exposure to enemy ground fire.

The Standard family of area defense missiles (Figure 7) provides the Navy's front line surface-to-air defense against enemy aircraft and cruise missiles. STANDARD missile is currently produced in three versions; SM-1 medium range (MR) Block VI (A), SM-2 medium range (MR) Block II, and SM-2 extended range (ER) Block II. The SM-2 missile incorporates significant technical advances that greatly improve range, accuracy, and electronic countermeasure resistance when compared to SM-1. The Block II version of SM-2 that we are currently producing features all digital guidance, improved fuzing, a more capable warhead, and advances in propulsion technology that are necessary to defeat an increasingly capable threat.

The SM-2 (MR) Block II missile will be the primary air defense weapon for 27 TICONDEROGA class AEGIS cruisers, 29 CALIFORNIA, VIRGINIA, and KIDD class ships that will receive the TARTER New Threat Upgrade conversion. Similarly, SM-2 (ER) Block II will be the primary air defense weapon for 21 guided missile cruisers and 1 guided missile destroyer planned to receive the TERRIER New Threat Upgrade conversion. When teamed with our AEGIS and NTU combatants, SM-2 provides the ability to conduct nearly simultaneous multiple engagements against high and low profile missiles and aircraft. This capability is essential in the potential environment of high volume attacks we face now and in the 1990's.

As shown in Figure 7, our entire fiscal year 1986 request is for the SM-2 version of Standard. Given the pressure of financial constraints and the need to maximize production of SM-2MR/ER for our highly capable AEGIS and NTU cruisers and destroyers, we have elected to stretch the procurement of the 600 SM-1MR missiles appropriated last year over both 1985 and 1986. This will allow us to maintain the production base until our next procurement of SM-1MR in fiscal 1987. At that time continued procurement of SM-1MR will be necessary to ensure that our 51 FFG-7 class ships have an adequate supply of the latest, most capable Block VI (A) version. We have been able to backfit many of the SM-2 guidance and ordnance improvements into SM-1MR to ensure these ships' primary weapon remains effective against aircraft and missile threats.

Rolling Airframe Missile (RAM) is being developed to provide a high firepower self defense system against anti-ship missiles. RAM will have a dual-mode passive radar frequency/infrared guidance system. This system will be installed aboard combatants, amphibious ships and auxiliaries to complement other anti-missile systems such as PHALANX and SEA SPARROW. RAM will be fired from SEA SPARROW launchers with two cells modified to hold 5 missiles each and from a 21 cell stand-alone launcher. The RAM missile, RAM ORDALT for the SEA SPARROW launcher, and the stand-alone launcher are now in full scale dvelopment. The RAM program is a cooperative effort with West Germany and Denmark. The fiscal year 1986 request contains $41.1 million for procurement of test and tooling equipment, and 117 missiles. The Navy plans dual source procurement of RAM and has included $3.6 milion in fiscal 1986 and $42.0 million in fiscal 1987 for second source selection, qualification, engineering support and necessary hardware.

Figure 7

ORDNANCE SUSTAINABILITY PROCUREMENT: SURFACE-TO-AIR MISSILES

	FY 1985		FY 1986		FY 1987		
WEAPON	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	NOTES
SM-1 (MR)	600	199.3	-	35.9	300	134.1	Medium range area defense weapon for missile frigates, C.F. ADAMS class destroyers. Also arms KIDD, CALIFORNIA, VIRGINIA classes prior to SM-2MR conversion.
SM-2 (MR)	529	355.0	846	509.7	900	527.0	Air defense weapon for TICONDEROGA class AEGIS cruisers, ARLIEGH Burke class AEGIS destroyers and KIDD, CALIFORNIA, VIRGINIA classes with New Threat Upgrade (NTU) conversion.
SM-2 (ER)	255	186.7	470	312.2	600	365.9	Extended range missile used on LEAHY, BELKNAP, BAINBRIDGE, TRUXTON, LONG BEACH class cruisers with NTU conversion.
SM-2 (Specific Applications)	-	-	-	-	-	10.0	Funding for DOD components of SM-2 nuclear warhead.
RAM (Rolling Airframe Missile)	30	20.4	117	44.7	400	112.7	Provides close range anti-missile defense. Dual mode passive radar frequency/infrared guidance will equip variety of combatants, amphibious and auxiliary ships.

Since the WPN testimony last year, we have realigned our procurement plans for both the multipurpose heavyweight torpedoes used by submarines and the lightweight torpedoes which serve as the main ASW weapon of surface combatants and aircraft.

The Navy is in the process of introducing the submarine launched MK-48 Advanced Capability (ADCAP) heavyweight torpedo as the front line replacement for the MK-48 MOD 4. Let me emphasize that the MK-48 ADCAP gives us a major leap in capability over the MK-48 MOD 4. Changes in the guidance and control system improve its effectiveness against quiet submarines. Advanced technology will provide improved performance under ice in shallow water, high seas and in conditions of strong thermal gradiants. Morever, improvements in propulsion will lead to the speed and deep diving capability required to meet the current and developing threat. The MK-48 ADCAP is sucessfully undergoing a most strenuous development program. This torpedo will meet the challenge of the deep diving, high speed submarine through the 1990's and is essential to maintaining the viability of our attack submarine force.

In last year's budget request the Navy planned to procure heavyweight MK-48 MOD 4 torpedoes at the annual rate of 144 in both 1985 and 1986, with 1986 the final procurement year. The new MK-48 Advanced Capability (ADCAP) version would have been phased in by means of kit conversions from earlier MK-48 torpedoes starting in fiscal year 1985. Initial procurement of all-up rounds of MK-48 ADCAP was planned for 1987. Subsequently, based on our continuing analysis of both the economic and developmental aspects of the MK-48 ADCAP program and the sense of Congress expressed during the fiscal year 1985 budget deliberations, the acquisition plan was revised. First, the MK-48 MOD 4 program will terminate with a reduced buy of 108 torpedoes in fiscal year 1985. Second, procurement of ADCAP will be in the form of all-up rounds from the start (30 in fiscal 1985), instead of modification kits. This year's request, as displayed in Figure 8, is an extension of that decision. It features a build-up in procurement of MK-48 ADCAP torpedoes at a rate which will be compatible with the production learning curve, with 123 planned this year and 280 in 1987.

Given its vital role in antisubmarine and antisurface warfare, we plan to procure the MK-48 ADCAP through dual source competition. In fiscal year 1985, the Navy will select and begin qualification of a second producer and start procurement of additional tooling and test equipment required. Our fiscal year 1986 request includes $45.0 million for engineering support, production of 12 qualification torpedoes by the second contractor and further test/tooling equipment. Fiscal year 1987 will include $36.8 million for further capitalization associated with dual sourcing and the procurement of 50 directed pilot production torpedoes from the second source. Full competition will begin in fiscal year 1988.

The Navy's MK-46 program for fiscal year 1986 and 1987 reflects both a slowdown in procurement of new all-up rounds and increased conversion of earlier models to the most effective configuration. Although the MK-46 torpedo was first introduced in 1966, its capabilities against the modern submarine have been progressively improved through design modifications which have enhanced its acoustic system and ability to resist countermeasures. The latest version is the MK-46 MOD-5 NEARTIP, or Near Term Improvement. NEARTIP will be a capable weapon against the majority of threats and will be the backbone of our torpedo inventory well into the 1990's. However, since the enhanced capability MK-50 Advanced LightWeight Torpedo (ALWT) will begin entering service in the late 1980's, it is appropriate to start winding down procurement of new MK-46 MOD 5 torpedoes this year. Accordingly, instead of the 1521 torpedoes which were originally projected in fiscal year 1986, the Navy is requesting 500 new MK-46 MOD 5's and will continue production at that level in 1987 and 1988. At the same time, funding for torpedo modifications

FIGURE 8

ORDNANCE SUSTAINABILITY PROCUREMENT: TORPEDOES AND OTHER ASW WEAPONS

	FY 1985		FY 1986		FY 1987		
WEAPON	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	NOTES
MK-48 ADCAP	30	$105.6	123	$417.4	280	$622.6	Most advanced sub-launched heavyweight torpedo. Capable against surface and submerged targets.
MK-48 MOD 4	108	$ 89.0	-	-	-	-	FY 1985 is last procurement. MK-48 MOD 4 remains capable sub-launched multipurpose weapon. Will remain in service through mid-90's.
MK-46 NEARTIP	1565	$229.7	500	$129.1	500	$106.8	Current front-line lightweight ASW torpedo used by aircraft, helicopters, surface ships. Will remain in service through mid-90's.
MK-46 MODS	-	$ 2.3	672	$100.3	672	88.8	MODS line converts early model MK-46's to CAPTOR use through FY 1985. Commencing FY 1986, converts early models to NEARTIP configuration.

FIGURE 8 CONTINUED

WEAPON	FY 1985 QUANTITY	FY 1985 COST	FY 1986 QUANTITY	FY 1986 COST	FY 1987 QUANTITY	FY 1987 COST	NOTES
MK-50 ALWT	-	-	-	-	84	$117.0	Advanced ASW torpedo for aircraft and surface ships. Capable against all threats through 1990's.
MK-60 CAPTOR	300	$122.0	-	-	-	-	Moored ASW mine employing MK-46 MOD 4 torpedo as payload. Procurement complete with FY 1985 purchase.
MK-67 MOBILE MINE	280	$ 22.6	280	$ 23.7	273	$ 26.1	Submarine launched bottom laid mine converted from MK-37 torpedo.
VERTICAL LAUNCHED ASROC	-	-	-	-	250	$ 71.1	Standoff ASW weapon for vertical launcher equipped ships (DD 963, CG 52, DDG 51 classes), Payload is MK-46 NEARTIP or MK-50 ALWT.
SWIMMER WEAPON SYSTEM	-	$ 1.6	-	$ 1.5	-	$ 4.2	Standoff weapon for use by Special Warfare Groups.

will be used to upgrade early model MK-46's to the MOD-5 NEARTIP standard. To ensure the lowest possible price for MK-46 torpedoes at this production rate, the Navy proposes to combine its acquisition of new torpedoes and the modifications program for 1986, 1987 and 1988 into a single three year multiyear procurement package. This plan will deliver a total of 1500 new NEARTIP torpedoes and 1663 conversions, resulting in a much needed improvement in our inventory position at an economical price. We estimate the proposed multiyear procurement will result in a savings of over $51.4 million compared to three annual buys of the same size. Of equal importance, this level of procurement will ensure the maintenance of the lightweight torpedo industrial base as we transition to production of the MK-50.

Two of our sustainability programs capitalize on conversion of older torpedoes to new functions. The MK-67 Submarine Launched Mobile Mine (SLMM) is based on the MK-37 torpedo which was superceded by the MK-48 as our major submarine weapon. In its new role, it is a potent force multiplier which will be used to close enemy harbors and chokepoints. As you can see in Figure 8, we intend to procure this system at a steady rate in fiscal years 1986 and 1987. The MK-37 is also used for the Swimmer Weapon System. This is a unique program which allows Navy Special Warfare Forces to carry out coastal and harbor attack missions from a standoff distance.

Although not in this year's budget request, funding for two critical new weapons will be requested in fiscal year 1987. These are the MK-50 Torpedo and the Vertical Launched ASROC (VLA). As previously discussed, the MK-50 torpedo will be our primary lighweight ASW torpedo in the 1990's, capable against all known submarines. The VLA will provide standoff ASW weapon capability for our newer surface combatants, the CG-47, DDG-51 and DD-963 classes equipped with Vertical Launching Systems. Carrying the MK 46 or MK-50 as a payload, VLA will offer significant increases in range and effectiveness over the earlier ASROC system which is launched from eight cell box launchers.

READINESS PROCUREMENT

Readiness funding ensures the ability of the Navy's operating forces, weapons systems and other equipment to perform their designed functions. Within WPN, readiness funding pays for targets used in fleet training, rework of weapons used in training and support costs for training ranges, and spares.

Figure 9 displays procurement plans for targets. Realistic peactime training is the sine que non of sucessful anti-air and antisubmarine warfare in an actual conflict. The WPN appropriation procures air and underwater targets which simulate threats for tracking and actual weapons firing. Some have extremely sophisticated capabilities. For example, the Mobile Target MK-30 used on instrumented underwater ranges can simulate complex submarine maneuvers at speeds up to 30 knots. Similarly, the AQM-37C highspeed supersonic target can replicate a variety of aircraft and missile profiles to exercise combat systems and crews of both ships and aircraft. At the other end of the spectrum are relatively inexpensive, expendable targets such as the Mini Mobile Target MK-38, an underwater target used in the open ocean to provide valuable sonar tracking and weapons firing experience to fleet antisubmarine crews. Overall, the $129.7 million we are requesting for all types of targets represents an early and visible return on investment.

Readiness procurement associated with missile testing, rework and ASW training is displayed in Figure 10.

Although TRIDENT I and POSEIDON missiles are no longer being procured, funding is required to support missile readiness flight tests necessary

FIGURE 9

READINESS PROCUREMENT: AERIAL AND ASW TARGETS

	FY 1985		FY 1986		FY 1987		
TARGET	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	NOTES
AERIAL TARGETS	-	60.5	-	105.6	-	105.4	Procures powered, remote controlled targets and towed targets for aircraft and ship training. Also used in RDT&E.
MK-38 MMT	1200	$ 2.5	1200	$ 3.5	-	-	Mini Mobile Target Expendable ASW target for open ocean training of surface ships. Multiyear procurement FY 1984 through FY 1986.
MK-39 EMATT	-	-	-	-	2584	$15.5	Expendable Mobile ASW Training Target. Improved open ocean target, capable of providing training to both surface ships and aircraft.
MK-30 Mobile Target	6	$21.3	6	$20.6	-	-	Reusable, sophisticated target. Used for training and testing on instrumented ASW ranges.

FIGURE 10

READINESS PROCUREMENT: MISSILE AND FLEET TRAINING SUPPORT

PROGRAM	FY 1985	FY 1986	FY 1987	NOTES
TRIDENT I	141.1	66.2	46.8	Funding supports procurement of reentry body components, test instrumentation for flight testing of missiles and production support.
POSEIDON	5.5	5.0	4.7	Flight testing support, warhead components.
OTHER MISSILE SUPPORT	6.7	12.3	22.9	Funds maintenance, support, test equipment for SUBROC ASW missile and missile launch-transportation canisters associated with Vertical Launch System.
TORPEDO SUPPORT EQUIPMENT	46.5	47.4	42.1	Maintains warshot inventories in operational status. Funds components required to rework torpedoes after exercise firings.
ASW RANGE SUPPORT	24.8	23.2	22.0	Provides for support and maintenance of Navy's underwater ASW tracking ranges used for training and testing. Procures necessary equipment, production support services, and range proofing for new equipment.
ASROC	25.9	15.6	18.1	Replacement components for ASROC missiles used in tests, training.

throughout the operational lives of the weapons. The 1986 budget request will also procure Department of Defense components supplied to the Department of Energy for warhead assembly. The TRIDENT I request of $66.2 million includes production support in the amount of $27.8 million which is associated with assembly and checkout of the final TRIDENT I missiles appropriated in fiscal year 1984.

Also shown in Figure 10 is the Navy's request for ASW readiness support funding. Antisubmarine weapons used in training are generally recovered, as contrasted to missiles, which are expended in the course of firing exercises. The Torpedo Support Equipment funding line procures components and supplies necessary to rework MK-46 and MK-48 torpedoes subsequent to training and test firings. Similarly, the ASROC funding line replaces ASROC components lost in exercises. The amount of funding required in both lines is directly related to fleet training requirements. ASW Range Support funding provides training range devices and weapon proofing equipment used to support operations at the Navy's eight underwater ranges. A majority of the range support funding supports training exercises, with the balance dedicated to acceptance proofing of new and reworked weapons and test projects related to service weapons.

Spares procurement is a vital element of weapons readiness. WPN spares and repair parts are in two categories. Initial and Replenishment spares are procured in support of operating forces and industrial activities which repair weapons. The quantities of initial spares required is determined in proportion to the number of end items such as torpedoes and guns which are procured. Funding for replenishment spares is based on the number of weapon overhauls required and the historical failure rate of weapon components. The Navy's request for spares funding is $166.6 million in fiscal year 1986 and $286.4 million in fiscal year 1987.

WARFIGHTING IMPROVEMENT

Figure 11 shows the WPN line items related to warfighting improvements for gun and mine systems. Satellite programs, missile modifications and industrial facility funding is shown in Figure 12.

This is the ninth year that PHALANX CIWS has been procured through the WPN account. The Navy plans to install a total of 672 systems aboard ship, of which 389 will be procured with WPN funds. Our CIWS testing program, one of the most rigorous ever conducted by the Navy, has consistently demonstrated that PHALANX is a potent, reliable system for terminal defense against low-flying anti-ship missiles or aircraft that penetrate fleet area defense. All PHALANX systems procured with fiscal year 1986 funds will be Block I configuration. Previous production versions were Block 0 model. Block I improvements include increased search elevation capability and expanded on-mount magazine capacity. The CIWS modification program currently performs two functions. Of the $37.1 million requested in fiscal year 1986, $24.4 million will buy kits to backfit Block 0 systems to the Block I standard. The remaining $12.7 million is for alterations to enhance the reliability and maintainability of CIWS systems.

As a result of the increased air threat throughout the Middle East, the Navy has ensured that every ship scheduled to mount CIWS is so equipped prior to sailing for that region. In 1984-85, the PHALANX production program was realigned to provide earlier deliveries to the fleet. Additionally, systems earmarked for non-deploying ships have been diverted to near-term deployers. As a result, 16 ships received accelerated installation of PHALANX in 1984. By the end of 1985, a total of 21 deploying ships will have received CIWS earlier than originally programmed.

FIGURE 11

WARFIGHTING IMPROVEMENT: GUN SYSTEMS, SMALL ARMS, MODIFICATION PROGRAMS

SYSTEM	FY 1985 QUANTITY	FY 1985 COST	FY 1986 QUANTITY	FY 1986 COST	FY 1987 QUANTITY	FY 1987 COST	NOTES
MK-15 CIWS	49	$169.4	39	$150.2	32	$132.9	PHALANX Close In Weapon System. Fast reaction, autonomous, 20MM gun system for terminal defense against cruise missiles and aircraft.
MK-15 CIWS Modifications	-	$ 30.3	-	$ 37.1	-	$ 56.3	BLOCK I modifications increase magazine capability and search evaluation angle to counter new threats. Other modifications enhance operability, maintainability and reliability.
MK-75/76MM Gun Mount	3	$ 10.9	6	$ 20.0	5	$ 17.9	Procures guns for modernization of Coast Guard cutters and maintenance pool for Navy/Coast Guard ships.

FIG 11 (CONTINUED)

SYSTEM	FY 1985 QUANTITY	FY 1985 COST	FY 1986 QUANTITY	FY 1986 COST	FY 1987 QUANTITY	FY 1987 COST	NOTES
MK-19/40MM	58	$ 1.2	56	$ 1.2	25	$ .7	Machine gun which fires 40MM grenades. For use by patrol boats, SPECWAR units, construction battalions.
25 MM Gun Mount	17	$ 3.1	29	$ 5.5	22	$ 4.3	Army 25MM Bushmaster cannon on MK-88 Naval Mount. Replacement for 20MM gun on patrol boats, amphibious and auxiliary ships.
Gun MODS	-	$ 10.5	-	$21.0	-	$23.4	Operability, reliability, safety modifications for 16 inch/50 CAL, 5 in/54 CAL, 40MM, 25MM guns.
Small Arms	-	$ 3.5	-	$11.3	-	$12.5	Procurement and modernization of weapons 50 CAL and below.
CAPTOR MODS	-	$ 5.7	-	$15.7	-	$15.4	Conversion of MOD 0 versions to improved capability MOD 1. Reliability upgrade for all MODS.

The MK-75 76MM gun mount is installed on new construction Navy FFG-7 class guided missile frigates, patrol combatant hydrofoils (PHM) and Coast Guard Bear Class cutters. It is currently being installed on Coast Guard HAMILTON class cutters as part of their mid-life modernization. In fiscal year 1986, four of the six gun mounts requested are for this purpose. The remaining two mounts will form part of a rotatable maintenance pool to support all ships armed with the MK-75. The maintenance concept for these ships is based on the periodic replacement of the gun mount on a six year cycle. The gun mount is then renovated at a shore facility and in its turn replaces another shipboard mount. This strategy is essential because the ships classes involved are maintained through short industrial availabilities which do not allow time for onboard overhaul of the gun.

Short range, high volume firepower is important to a variety of Navy ships, patrol craft, and shore units. The MK-19 MOD 3 40 MM machine gun and the 25MM gun described in Figure 11 satisfy this requirement. The MK-19 MOD 3 fires 40MM grenades to a maximum range of 2400 yards. It is an exceptionally effective close range defensive weapon for auxiliary and amphibious ships, patrol craft, and construction battalions. The 25MM gun system will replace obsolete 20MM MK-16 guns as the main battery for 65 foot patrol boats and as general purpose short range armament for new construction amphibious and auxiliary ships. Both weapons are obtained through multiservice procurement programs.

The WPN request for Small Arms, although small in comparison to funding for other programs, has a critical priority. In his Fiscal Year 1986 Posture Statement, the Chief of Naval Operations used the term "violent peace" to categorize the current world political climate. Terrorism is a continuing fact of life, and terrorist acts have the potential for placing U.S. citizens at hazard anywhere in the world. In consequence, the Navy has an expanding requirement to provide security for naval units, ships and installations at home and abroad. Similarly, the Navy's unconventional warfare units, such as Seal Teams and Special Boat Units, have a range of capabilities often essential to antiterrorist actions and rapidly developing contingency operations in support of U.S. interests. The Navy, in coordination with the other services, has initiated programs to increase security capabilities and rapidly expand its special warfare forces. This expansion program accounts for the major increase in WPN Small Arms and Weapons funding between 1985 and 1986 which is shown in Figure 11. The additional $7.8 milion will procure a variety of machine guns, mortars, rifles, shotguns and other weapons essential to base and ship protection. Fiscal year 1986 funds will also equip a new Seal Team and provide modern weapons to existing Special Warfare Units. Additionally, the Small Arms line contains weapons for a planned new Mobile Construction Battalion, an additional Naval Beach Group, and funding for procurement of the 9MM Personal Defense Weapon.

The Gun Modification program funds several types of actions. The Ordnance Alteration Program provides hardware to correct safety deficiencies, improve operability, reliability, maintainability, and system availability of all gun systems. The alterations are developed in direct response to reports from the fleet. In fiscal year 1986, the majority of the requested funding is for this purpose. A major segment of the alteration program, $5.0 million in fiscal year 1986, procures hardware kits to install the ammunition load selection capability in Lightweight MK 45 five inch/54 caliber guns on SPRUANCE (DD-963) and KIDD (DDG-993) class destroyers. This very important modification will provide the capability to select instantaneously a specific type of ammunition from the loader drum. It is an essential part of the conversion to enable these ships to use Semi-Active Laser-Guided Projectile (SAL-GP) ammunition.

Although procurement of new CAPTOR mines ended in fiscal year 1985, funding for CAPTOR modifications is an important part of the WPN warfighting improvement program. Two types of modifications are contained in the request. First, a continuing program converts baseline MOD 0 CAPTORS to the new MOD 1 configuration, which features improved detection capabilities. In fiscal year 1986, the Navy request is for 174 kits at a cost of $14.8 million. The second category of CAPTOR modifications replaces electronic and electrical components to improve reliability. Cost for this program in fiscal year 1986 is $0.9 million.

A very important part of the funding which improves our warfighting capability is associated with space systems. As can be seen in Figure 12, WPN procures and supports three categories of satellites. The Astronautics program provides the net of navigation satellites used by our submarines and many surface ships. Fiscal year 1986 funding of $12.6 million provides for the launch of two satellites and for support funding. This year the Fleet Satellite communications program will launch one satellite. Fiscal year 1986 marks the beginning of Navy funding for the Defense Meteorlogical Satellite Program (DMSP), a joint service program with the Air Force serving as Executive Agent. The objective of DMSP is to provide orbital sensors for the measurement of atomospheric and oceanographic parameters. Navy procurement is for the Special Sensor Microwave Imager (SSM/I),a component of the satellite which will provide a new capability to monitor rain rate and soil moisture and an improved capability to measure atmospheric water vapor and polar ice parameters.

The missile modifications funding request shown in Figure 12 aggregates the programs for POSEIDON, TOMAHAWK, HARPOON, PHOENIX, SPARROW, STANDARD and SIDEWINDER. Missile modifications include a number of essential actions to improve our warfighting capabilities. All missiles receive performance, reliability, maintainability and safety alterations based on testing results and fleet feedback. Some modification programs lead to major increases in operational capability. For example, the SIDEWINDER modifications include actions to upgrade earlier AIM-7H/L models to the AIM-7M standard. Quite simply the modification request is an essential expense to ensure that our missile inventory, which represents a major long term investment in warfighting sustainability, is properly configured to meet operational requirements.

SUMMARY

We believe the Navy's fiscal year 1986 WPN request is balanced, affordable and properly constructed to meet the needs of the Navy and the nation. Our overriding emphasis in this year's WPN request is ordnance sustainability to ensure that we attain our strategic and tactical weapons inventory goals as rapidly as possible consistent with overall fiscal realities. We have funded the readiness account -- TRI-DENT I, aerial and ASW targets, range support, spares and so forth -- at a level which will provide the fleet with the training and material availability essential to tactical proficiency. Warfighting improvement funding, the smallest sector within WPN is selectively targeted at our most pressing requirements --close-in air defense, anti-terrorist security, and an expanded special warfare capability.

It is no exaggeration to say that ordnance and support material procured by the WPN appropriation provides the key to the fleet's ability to carry out sustained combat operations at sea in support of the national interest. Your support of this year's budget will continue the steady progress toward full readiness and sustainability which has marked the preceding years of this decade.

FIGURE 12

WARFIGHTING IMPROVEMENT: SATELLITES, MISSILE MODIFICATIONS, INDUSTRIAL FACILITIES

PROGRAM	FY 1985	FY 1986	FY 1987	NOTES
ASTRONAUTICS	14.6	12.6	15.1	Supports Satellite Navigation (SATNAV) system. WPN funding procures satellites, launch vehicles, sustaining costs.
Fleet Satellite Communications	51.4	56.3	108.3	FY 1986 funds launch and NASA support of one satellite.
Defense Meteorlogical Satellite	-	8.8	9.9	Funds Navy's share of components for DOD weather satellites system. Cooperative program with USAF.
Missile MODS	48.8	89.9	57.4	Procures components to upgrade performance of models and incorperate safety, maintainability, reliability improvements.
Weapons Industrial Facilities	31.4	23.4	16.8	Capital rehabilitation and emergency repair of equipment, civil works, buildings at Navy owned Naval Industrial Reserve Ordnance Plants (NIROPs).

BIOGRAPHICAL SKETCH

REAR ADMIRAL DAVID MATTSON ALTWEGG, U.S. NAVY

Rear Admiral David M. Altwegg was born 24 February 1930, in Watertown, New York. He enlisted in the Navy in May, 1947 and received a fleet appointment to the U.S. Naval Academy in 1948. He received his commission in June 1952. He was promoted to Rear Admiral in May 1976.

Prior to selection as a flag officer Rear Admiral Altwegg commanded USS MAHAN (DDG-42), USS HORNE (CG-30), and the Naval Ship Weapon Systems Engineering Station, Port Hueneme, California.

Rear Admiral Altwegg has served in a variety of shore and sea assignments since his promotion to flag rank. Initially he commanded the Pacific Missile Test Center, Point Mugu, California. He then reported to Washington, D.C. for duty as the Commander, Antisubmarine Warfare Systems Project Office in the Naval Material Command followed by duty as Director, Security Assistance Division, Office of the Chief of Naval Operations. Subsequently he was Commander of Cruiser Destroyer Group Two, homeported in Charleston, S.C. He reported to his present assignment as Assistant Deputy Chief of Naval Operations (Surface Warfare) in February 1983.

During his career, Rear Admiral Altwegg has completed a range of technical and managerial curricula. He earned a Bachelor of Science degree in Electrical Engineering from the U.S. Naval Postgraduate School in 1958 and Master of Science from the Massachusetts Institute of Technology in 1959. He graduated from the U.S. Nuclear Power School, West Milton, N.Y., in 1966 and the Industrial College of the Armed Forces, Washington, D.C. in 1971.

Rear Admiral Altwegg's decorations include the Legion of Merit with two Gold Stars in lieu of second and third awards, Bronze Star with Combat V and the Meritorious Service Medal.

He is married to the former Rosina Squillace. They have a daughter, Shauna, an attorney working for the Federal Government.

HARM-LOADED F/A-18

Senator STEVENS. Thank you very much.

Do you have a statement?

Commodore KELLY. No; I do not have a prepared statement.

Senator STEVENS. Senator Stennis, do you want to go first on this one?

Senator STENNIS. You are the chairman, you go ahead.

Senator STEVENS. It has been reported that the HARM missile has been stripped from the F-18 pending major technical changes that will end inaccurate high-speed firing. That was in the "Defense Weekly" of May 13.

Admiral ALTWEGG. As is often the case, Mr. Chairman, with some of the products of the media, that is an untrue statement.

Senator STEVENS. If that is not true, what are your plans?

Admiral ALTWEGG. The F/A-18 armed with HARM missiles is an integral part of our current battle forces and any report that we have deleted the HARM capability from the F-18 is just not true.

I might add parenthetically that HARM and the F/A-18 are mated and deployed on *Constellation* in the Indian Ocean as we speak.

Senator STEVENS. I think they must be talking about future activities. They say that once the new software revision is verified, it will be reintroduced into the missiles that are coming onstream now as a result of 1984 production.

Is that right? There must be something to this. You know where there is smoke, there is fire, Admiral.

What caused that story?

Admiral ALTWEGG. There have been some not completely understood difficulties with supersonic launches of the HARM missile. There is currently a restriction limiting firings of HARM from the F/A-18 to subsonic speeds until we more fully understand not only the hardware impacts, but also the software impacts. That leads me to my next comment, which is the "1984 software for the HARM missile."

There had been allegations in the past that the Navy and its contractor did not have a complete handle on what was in the software of that missile ostensibly because of failure to invoke the latest mil standard for creating software.

As Secretary Cooper indicated in his testimony, the Naval Avionics Center at Indianapolis has been charged with conducting over the next 90 days, a complete hardaware and software audit of the HARM missile to ensure that what is being built is accurately reflected in the documentation.

MISSILE RETROFITTING

Senator STEVENS. Are you going to have to retrofit some of these missiles with this new embedded software?

What does embedded mean in this sense?

Admiral ALTWEGG. Embedded means that the capability to function is contained within the missile rather than some external source such as the host aircraft having to provide intelligence to it.

Senator STEVENS. You will retrofit these missiles?

Admiral ALTWEGG. That is correct. We will retrofit the 1984 software package into those missiles produced in prior years.

Senator STEVENS. What does it cost to retrofit embedded software? Does that mean strip it down again?

Admiral ALTWEGG. There is a cost associated with that. It is certainly not significant in comparison to the overall program.

I will provide that for the record.

[The information follows:]

HARM AGM-88A

Retrofit of the HARM software requires removal and replacement of two circuit boards in the missile's guidance section. The hardware cost of the two new boards is estimated at $3,000 per missile. Breakdown of the missle, replacement of the boards and retest of the missile, all of which will be performed at a Naval Weapons Station, is estimated at $1,000 per missile. The total quantity to be retrofitted is approximately 676.

SECOND SOURCING OF HARM COMPONENTS

Senator STEVENS. Does it mean running it back through the line?

Admiral ALTWEGG. Yes; it will have to go to the depot.

Senator STEVENS. It has to go back where it was constructed?

Admiral ALTWEGG. It will go back at this time to the manufacturer's plant.

Senator STEVENS. Are you now considering, as a result of all this, second sourcing nearly all of the HARM components?

Admiral ALTWEGG. That is correct.

Senator STEVENS. Second sourcing is a way to deal with cost rather than quality?

Commodore KELLY. I think, Senator, you are taking a quote from the Defense Weekly article which includes a whole bunch of problems or perceived problems in a few sentences. I don't agree that you can draw conclusions that we are second sourcing because of these things that we have been talking about thus far.

Obviously, we are concerned with cost and want to keep driving the cost of the missile down, so as a normal process we are second sourcing many of the components to do two things.

One, to reduce cost and, two, to broaden the production base.

PRODUCTION SLOW DOWN

Senator STEVENS. Why don't you slow down production until you get the low cost seeker?

Admiral ALTWEGG. We need the HARM missile to ensure our warfighting capability.

Senator STEVENS. You are not going to get them. The minute they come off, you are going to send them back through the line to get the improved software.

Admiral ALTWEGG. As soon as we complete testing that is currently ongoing to validate the work of the 1984 software, and that will be done in this and the succeeding quarter, we will be able to introduce the 1984 software in production.

I should add that HARM missiles that are in the fleet today represent a tremendous capability. I would not want you to think that without the 1984 software that we have missiles that are not capable.

There were known deficiencies prior to the 1984 software. They are well known to us and we will, of course, utilize those missiles accordingly, but there is a tremendous warfighting capability represented by the missiles that are out there on the Constellation today.

Senator STEVENS. Will you give the committee the time frame that you are talking about?

I understand that 60 percent of the cost of these missiles is really represented by this low-cost seeker. If that is true, to run them through with the old software and with the knowledge that we have to send them back to the depot and run them through again to get the improved software, it seems to me to be costly and inefficient.

Commodore KELLY. I might add that the perceived problems with the software you are talking about need to be taken in perspective.

Some of the recent failures that we have had were at the real hard spots of the envelope against very, very tough targets, some of which were not necessarily representative of the threat. That was with 1982 software.

The 1984 software, which is a normal update software, had already been developed and was programmed to be tested about this time frame. In fact, it is going to be tested later this month.

The article is misleading in that it said that the recent failures have caused major revisions to the software. That is not true. We have had the 1984 software program all along. It will sweeten up some of the known problems we have had with the missile against very, very tough targets.

We are going to demonstrate that within a month or month and a half. Once these revisions have been proven out, they will be incorporated in the 1984 production line and subsequent missiles and then we will retrofit those previous missiles when they come in for their normal overhauls.

Admiral ALTWEGG. Mr. Chariman, I would like to clear up one thing here. The low cost seeker development and the HARM missile being produced in Dallas, TX, are separate and distinct programs. We have just selected two contractors to develop the low cost seeker.

Meanwhile our HARM Production Program at Texas Instruments goes on.

Senator STEVENS. I also understand if your competition proves successful, every HARM missile we produce will go back to that depot to get that equipment replaced?

Admiral ALTWEGG. No, sir. There is no connection between the two programs. The Low Cost Seeker Program is a separate, congressinally mandated research and development program where we are carrying out the wishes of the Congress.

Also, the HARM Low Cost Seeker Program and the 1984 software are separate and distinct.

Senator STEVENS. I have either misunderstood or been misinformed. The production coming off the line now will not go back through. I thought you agreed that the production coming off the production line would be back through and get the new software onced it is perfected?

Admiral ALTWEGG. Missiles being produced at the HARM facility in Dallas will go back to the depot and get the 1984 software at the time they would receive their routine depot maintenance.

Commodore KELLY. Two circuit boards would change. It is not a new low cost seeker as you referred to it.

Admiral ALTWEGG. It is separate and distinct.

PENGUIN ANTISHIP MISSILE

Senator STEVENS. Now, turning to the Penguin antiship missile, we put in $14 million for R&D and $23 million for procurment last year. I am told this request before us now is $19.6 million for more R&D and $3.1 million for aircraft integration work.

We didn't anticipate this program would implicate programs such as Harpoon.

What is the relationship between the Penguin and the Harpoon?

PENGUIN/HARPOON RELATIONSHIP

Admiral ALTWEGG. Mr. Chairman, the Penguin missile is being developed specifically for carriage by the Lamps III helicopters. The Lamps III helicopter's primary mission is antisubmarine warfare. It has a secondary mission of antisurface warfare, although heretofore it has not had a weapon to carry in that mission.

That situation has existed primarily because there has not been anything available, certainly in our inventory, to adapt to the aircraft. It was suggested 2 years ago, and in fact, the Senate in 1984 appropriated $5 million to look into the worth of marrying Penguin with the Lamps MK-III.

Senator STEVENS. Aren't you proposing to modify 33 FFG-7 destroyers so that they can handle Penguin?

Admiral ALTWEGG. We will modify the magazines in 33 FFG-7's. These magazines would have been modified in any event to accommodate the MK-50 Advanced Lightweight Torpedo.

Senator STEVENS. But they have the Harpoons on them now?

Admiral ALTWEGG. That is correct, the FFG-7's carry Harpoon now.

Senator STEVENS. You are going to move over those Harpoons so that they will be equipped with Penguinss?

Admiral ALTWEGG. They will continue to carry Harpoons. We will put four Penguins in each of those ship's torpedo magazines, displacing a like number of torpedoes. It will give us, frankly, additional antisurface warfare capability.

Senator STEVENS. They are not replacing the Harpoon?

Admiral ALTWEGG. Not at all. The Harpoons will still be carried in the magazine associated with the ship's primary missile launcher. The range capability of the two weapons differs by a factor of four.

PROGRAM COST PROJECTION FOR PENGUIN

Senator STEVENS. Can you tell us what the program cost projection now is for Penguin? We thought it was a fairly small program. It appears that it is taking on permanent cost factors.

Admiral ALTWEGG. The initial look at this program included more ships than the 33 named. The costs were approaching some $300 million. That was an unacceptable price to the Navy and we have restructured that program in recent months. It is now a program of about $195 million.

Senator STEVENS. Senator Stennis, do you have some questions now?

Senator STENNIS. Quite briefly.

What impact will these troubles have on the cost of the HARM missile?

Admiral ALTWEGG. The cost decline in the HARM missile has been very heartening to the Navy over the last couple of years. We had some serious difficulties with our contractor some 3 years ago when, frankly, at one time we threatened to cancel the program.

Subsequently, Congress mandated the low cost seeker initiative. I can report to you that the cost trends are favorable in a downward direction.

Senator STENNIS. What do you mean by that? We have to deal in dollars.

Admiral ALTWEGG. We estimate that the unit cost with approximate $270,000 each for the 1986 buy.

Senator STENNIS. Down that much?

Admiral ALTWEGG. Yes, sir. At one point it appeared that the missile was going to cost about a half million dollars each.

Commodore KELLY. In direct answer to your question, Senator Stennis, the current problems that you refer to should have no cost impact on the production. That software which we think corrects the problems that you refer to is about to undergo testing later this month and the beginning of June.

That will be incorporated in the production line. It should have no impact on the unit price.

Senator STENNIS. So, you would not assign any of this cost on this missile because of this trouble you have been telling us about?

Commodore KELLY. That is correct.

Senator STENNIS. That is reassuring. I would now like to turn to a question regarding the Trident II missile. The SAR published in March of this year for the Trident II missile provides information on the cost and schedule status of $6 billion development contract, launch, fire control, navigation, test, and instrumentation. According to SAR, each of these contracts is reported as being behind schedule. What is the significance of these contract delays?

Admiral ALTWEGG. Senator Stennis, I would like to take that for the record.

[The information follows:]

TRIDENT II MISSILE

The D-5 development program, with each of its six subsystems (Launcher, Fire Control, Guidance, Navigation, Test Instrumentation, and Missile) remains on schedule. While the contracts for these subsystems show some internal contractor schedule delays, such delays reflect the effects of normal events during the development phase of a weapon system. Slack has been built into the various phases that make up each contract work schedule and no major contract milestones have been impacted. All major milestones, such as full scale motor firings and delivery of GFE and GFI to the TRIDENT shipbuilder, remain on or ahead of schedule. We still feel confident about meeting the 1989 IOC.

Basically, the delays in each subsection have been due to late release of engineering design drawings and, as a result, later than planned placement of purchase orders. The reasons for the late release of drawings vary: e.g., the design is more complex than originally anticipated, some personal shortages, and/or contractors wished to take more time to design more producible, less expensive components of particular subsystems. The effect of slippages in the design phase varies for each subsystem in subsequent phases. For example, for Launcher: late deliveries of tooling and test fixtures; Fire Control: later than planned manufacturing start ups; Guidance: delays in some test equipment and software development; Navigation: slower-than-planned development of software and hardware for several subsystem components; Test Instrumentation: late receipt of materials; Missile: later than planned placement of orders. However, as stated above, no major contract milestones have been impacted and we anticipate meeting the 1989 IOC.

Admiral ALTWEGG. However, the IOC of 1989 for that missile is firm and it enjoys nationally, and within the Navy, the highest priority of any program. I would be very surprised if we were facing a slippage.

Senator STENNIS. That is why I am asking the question because of its high priority, as I understand it.

Admiral ALTWEGG. The highest.

Senator STENNIS. It is looked upon most favorably. You have had trouble with the MX.

The next major milestone in the Trident II Program is the first development scheduled for January 1987. Do you anticipate any problems in meeting that mark?

Admiral ALTWEGG. No.

Senator STENNIS. So, everything is flying high?

Admiral ALTWEGG. Yes; I talked recently to Admiral Clark about his program. He is confident of its future and its being available to the National Command Authority in 1989 as originally prescribed.

Senator STENNIS. That is fine.

That is all I have, Mr. Chairman.

Senator STEVENS. Senator Proxmire.

Senator PROXMIRE. Thank you, Mr. Chairman.

HARM TEST RESULTS

In the questioning of the previous witnesses, Admiral, the question was asked about recent tests of HARM, how many have been missing the target?

The information that I have, which may or may not be accurate, indicated that the HARM missed seven of the eight targets and ony scored a marginal success on the eighth. If that is not accurate, what is the truth?

Commodore KELLY. That is not accurate. The botton line is three of those flights were a total success. The additional one was marginal and some of it is classified. I will be happy to provide that information for the record.

Senator PROXMIRE. Of the recent eight?

Commodore KELLY. The recent eight that people are talking about.

Senator PROXMIRE. Three were successful.

Commodore KELLY. Yes, sir.

Senator PROXMIRE. And one was marginal and four were not successful?

Commodore KELLY. That is right.

Admiral ALTWEGG. Senator, we have provided to the staff a complete summary of those firings which I am sure can be made available to you.

[The information follows:]

HARM

That is not accurate. The bottom line is three of those flights were totally successful and one was a marginal success. Detailed information on these firings have been provided to your staff. The flights are summarized below.

Flight/launch aircr.	Purpose	Results
8 May 84, F/A-18	F-18 Harm integration	[Deleted.]
19 May 84, F/A-18	F-18 Harm integration	[Do.]
1 Jun 84, F/A-18	F-18 Harm integration	[Do.]
6 Jul 84, F/A-18	F-18 Harm command-launch computer assessment	[Do.]
2 Nov 84, F-4G	Demonstrate fiscal year 1982 missile changes	[Do.]
25 Jan, A-7	Fleet firing	[Do.]
6 Feb, F/A-18	F/A-18 avionics/Harm integration	[Do.]
12 Feb, F/A-18	Fleet firing supersonic	[Do.]

Note.—Fired against a low band, slow rotating target which is a known Harm deficiency being corrected by a fiscal year 1984 software update.

INCONSISTENCY OF HARM-LAUNCHED SUPERSONIC FIRINGS

Senator PROXMIRE. Live firings indicated that HARM launched at supersonic speeds resulted in wideness of the target.

Admiral ALTWEGG. There is a problem that we don't fully understand with supersonic launch of that missile from F/A-18's. We have put a restriction on firing other than at subsonic speed from F-18's only until we more fully understand the problem. Part of the problem is correctable by the software revision I discussed previously.

We have to assure ourselves that there is not a hardware problem before we lift these restrictions.

Senator PROXMIRE. Texas Instruments is the manufacturer?

Admiral ALTWEGG. That is correct.

Senator PROXMIRE. Are you satisfied with the cost performance of their program?

Admiral ALTWEGG. We presently are quite well satisfied with the cost performance of the contractor. However, we continue to strive for reduced cost so that we can get more munitions for the dollar.

CURRENT UNIT PRICE OF HARM MISSILE

Senator PROXMIRE. Is your current projection of the total program cost of HARM now $6.7 billion and what is the current unit price of the missile?

Commodore KELLY. While Admiral Altwegg is looking up that figure, I might add that comments we have received from the fleet people who have HARM deployed have been overwhelmingly positive.

Admiral ALTWEGG. The total program cost is projected to be approximately $7 billion. In the 1986 budget submission we estimated that we would pay about $295,000 for each weapon. Based on subsequent negotiations associated with the fiscal 1985 contract, we believe the unit cost will be even lower.

Senator PROXMIRE. That start at $700,000 has been reduced?

Admiral ALTWEGG. That is correct. Back in 1983 we paid $900,000 each.

Senator PROXMIRE. Is it true that Texas Instruments wanted $400,000 each for the avionics kits to carry the HARM and reduced the price to $298,000 including a $200,000 computer, which the Navy says only cost $100,000?

Admiral ALTWEGG. That is an allegation that is being looked into. We expect to have the answer shortly on the worth of that allegation.

Senator PROXMIRE. Will you provide the committee with that?

Admiral ALTWEGG. We will provide that for the record.

[The information follows:]

HARM AGM-88A

The HARM command launch computer [CLC] is an avionics computer used in Navy aircraft (A-7E, F/A-18 and A-6E) to provide target information to the HARM missile and to accomplish interface functions with other aircraft avionics such as electronic jammers and radar warning receivers. One version, called the AWG-25, is used on the A-7E, while a slightly different version, called the CP-1001, is used on the A-6E and F/A-18.

The CLC, developed by Texas Instruments as part of the overall HARM engineering development program, cost approximately $260,000 apiece in 1981 for the original product quantity of 30. Subsequent negotiated procurements with Texas instrument have reduced the price in 1985 to approximately $130,000 apiece. The price reduction is due to a combination of factors: production learning improvements, increased procurement quantities, aggressive government price negotiations, and Texas Instruments knowledge that the government was seriously pursuing second sourcing.

An effort to develop a technical design disclosure package suitable for competitive procurement of the CLC was begun in mid-1982. This effort formed the basis for second source competition for qualification and production options that was won by Lear Siegler, Santa Monica, California. The unit price for the qualification and production units is approximately $52,000.

LIVE MISSILE FIRINGS

Senator PROXMIRE. You are looking at it?

Admiral ALTWEGG. That is correct.

Senator PROXMIRE. On average, how many live missiles does the Navy pilot get to fire in any given year?

How many Phoenix missiles will he get to fire, Sparrows and Sidewinders?

Admiral ALTWEGG. I will yield to my aviation colleague here to answer that question, Senator.

Commodore KELLY. We can provide specifically that number for the record. I am going from past experience right now, and I am not up to speed with the exact number that we are currently firing.

[The information follows:]

PHOENIX

In order to most rapidly increase our missile inventories the following constraints have been placed on Navy live missile firings:

Missiles	
Phoenix	[Deleted.]
Sparrow	[Deleted.]
Sidewinder	[Deleted.]
Maverick	[Deleted.]

*Normal squadron manning is 16 aircrews. An average airwing training and deployment cycle is approximately 18 months.

**Maverick firings support tactics development and evaluation.

NONCOMBAT EXPENDITURE OF AMMUNITION

Senator **Proxmire**. Let me repeat that; Phoenix, Sparrow, Sidewinder and Maverick for the record.

Admiral **Altwegg**. Some 2 years ago we looked at our noncombat expenditure of ammunition, in particular missiles, and we made the determination that if we significantly reduced our noncombat expenditures, we would be able to fill our magazines up quite a bit earlier.

Therefore, we have reduced to some degree and we compensate with increased use of simulators.

VALUE OF LIVE FIRINGS

Senator **Proxmire**. Isn't the experience with actual live firings useful and important?

Admiral **Altwegg**. Absolutely.

Commodore **Kelly**. It absolutely is. We do not, of course, want to stop doing that. But recognizing the fiscal climate, we have really scrubbed that number down to what we think is the bare minimum.

We have also tasked our operational test force, OPTEVFOR to participate in designing the scenarios in which those missiles are fired so that we get good data from every single one of those missiles that is fired. We have a very good track record on this.

HUGHES AIRCRAFT PRODUCTION PROBLEMS

Senator **Proxmire**. Are you convinced that Hughes Aircraft has solved the Phoenix production problem?

Admiral **Altwegg**. We feel very sanguine about the situation at Tucson. We are on schedule with the recovery program. The agreed upon number of missiles were delivered in February, in March and in April, and we are on track this month for the delivery of 10.

Now, I should hasten to add, however, there are still some quality problems at Tucson which the Navy and the contractor are working to overcome and we feel confident of the future.

Senator **Proxmire**. How many defective Phoenix missiles were accepted by the Navy before you found out about the problems and stopped delivery on June 22 last year?

Admiral **Altwegg**. I think the number was somewhere in the vicinity of a hundred. I should add that Hughes, at no cost to the taxpayers, has agreed to rework those missiles.

Senator **Proxmire**. Wasn't the design of the Phoenix compromised with the Russians when we supplied F-14's and Phoenix to the Shah of Iran and they fell into the hands of the current regime?

Commodore **Kelly**. I would prefer to provide that for the record. I can't answer that in open session.

[The information follows:]

Phoenix

We have no choice but [deleted] that the AIM-54A [deleted] with the fall of the Shah. In 1980 the design of the AIM-54C was reevaluated. [Deleted] is part of the AIM-54C+ configuration which is undergoing operational test and evaluation at this time.

DUAL-SOURCING OF PHOENIX

Senator **Proxmire**. Why didn't the Navy move to dual source the Phoenix years ago instead of waiting until now?

Admiral **Altwegg**. I think some economic analyses that have been conducted would lead one to believe it might not be in the best interest of the program.

However, as we are learning now on a weekly basis, these second source judgments are not subject to rigorous economic analysis and in fact we are surprised more and more by how much the taxpayer is benefiting from the second source initiatives of the Secretary of the Navy.

Senator **Proxmire**. I appreciate that. I think that is a good initiative on the part of the Secretary of the Navy. It is something that certainly makes good common sense to have competition. It is obviously going to be more costly sometimes, but in the long run I think it would work to your advantage.

Admiral **Altwegg**. We have experienced no disappointments to date.

Senator **Proxmire**. Thank you.

Thank you, Mr. Chairman.

Senator **Stevens**. I have just a couple more questions.

TOMAHAWK MISSILES

In this request you have $670.2 million for 248 Tomahawk missiles. I am informed $30 million of that is for 10 of the so-called TLAM-D.

Admiral **Altwegg**. That is correct.

Senator **Stevens**. I am also told that that schedule, that development is far beyond schedule and that test results are not there to support that production decision; is that correct?

Admiral **Altwegg**. We have not had a lot of testing, that is correct. But we really look at these 10 missiles as an opportunity to get some preproduction tooling created and also manufacturing processes in place.

Senator **Stevens**. Don't you already have test missiles?

Admiral **Altwegg**. We do not. There were no missiles in the 1985 budget, nor are they being built.

Senator **Stevens**. Are these 10 TLAM-D's for test purposes?

Admiral **Altwegg**. These are being used for testing, that is correct.

Senator **Stevens**. Why is it out of production money rather than R&D money?

Admiral **ALTWEGG**. I am not prepared to answer that. We will have to provide that for the record. I might have misspoke on the 10. Allow us to provide that for the record.

[The information follows:]

TOMAHAWK TLAM/D

Test and evaluation missiles for the TLAM/D test program will be drawn from 16 TLAM/C test vehicles authorized by Congress for test and evaluation in the FY 1983 TOMAHAWK restructured program. Seven of the 16 missiles authorized were used in the recently completed Operational Test and Evaluation phase of the TLAM/C program. The remainder will be used for TLAM/D testing.

The 10 TLAM/D missiles requested in the FY86 budget are needed to instill a good transition of TLAM/D production, achieve scheduled initial inventory and for follow-on testing. Production missiles are authorized by Congress for use in follow-on testing.

NAVY RESPONSE TO HUGHES SHUTDOWN

Senator **STEVENS**. We understood you already had enough test missiles. I talked before today about this Hughes Aircraft shutdown due to quality control than applied to Phoenix and Maverick.

Can you tell us what the Navy is going to do about this?

You have in this request some 500-missile buy from the same supplier, nearly double that of the past, in order to get up to the second source. That is your plan, as I understand it.

Admiral **ALTWEGG**. Are we talking Phoenix now?

Senator **STEVENS**. Yes; the Phoenix.

Admiral **ALTWEGG**. It is the same contractor, yes, sir.

Senator **STEVENS**. I have to tell you it looks like we are going to a second source, but we are going to keep this first source going at the same rate; is that right?

Commodore **KELLY**. Senator, if I might add, the Navy two years ago put a production cap on the Phoenix program for some of the reasons that Senator Proxmire alluded to before, to make sure that what we were putting out was going to be representative against the current threat.

In addition to that, we had some reliability problems a couple years ago. Those problems have been solved.

Senator **STEVENS**. Are you able to tell us now that they are solved?

Commodore **KELLY**. We think the reliability problems are solved. In fact, the new version of the Phoenix missile which is coming off the line goes into additional testing very shortly.

DECLINE IN DEFECT RATES

Senator **STEVENS**. GAO told us that last reporting period showed that the defect rates in both Phoenix and Maverick were not good.

Admiral **ALTWEGG**. To answer that question, Senator, the Navy and the contractor have established mandatory Government inspection points throughout the manufacturing process at Hughes.

True, defects are still detected at these various inspection points, but while we are still finding some defects, their absolute numbers have continued to decline.

But the quality is quite acceptable and the yield of the production line again is meeting our needs and Hughes Aircraft is on the recovery schedule in its production of Phoenix missiles.

Senator **Stevens**. I still think it is better to spend an additional $200 million to start up a second line and have two producers in this area.

Admiral **Altwegg**. That is correct.

Senator **Stevens**. Why?

Admiral **Altwegg**. There are several compelling reasons One, to have a second source so that we are not relying on a single producer.

Two, so that in the case of mobilization we will have a sufficient industrial base available to the country.

Three, in the event of a catastrophe, with a single producer we would be out in the cold. We have critical warfighting needs and can be assured of continuous deliveries only by two producers.

Finally, we expect a significant reduction in the cost of the weapon with the availability of a second producer.

Commodore **Kelly**. We also have, as you well know, an inventory shortage now which we are trying to pump up as soon as we can. We have desperate need.

Admiral **Altwegg**. We are only at about 30 percent of our inventory objective.

SIDEWINDER MISSILE

Senator **Stevens**. Let us go to Sidewinder. We have comments also about AMRAAM.

Why do you need Sidewinder in view of the AMRAAM?

Admiral **Altwegg**. I assume we are talking about the product improvement program for Sidewinder?

Senator **Stevens**. Right.

Admiral **Altwegg**. Like RAM, that is being produced by the United Kingdom and a consortium of companies with a memorandum of understanding to which we are signatory, will not be available until 1993-1995. We have an opportunity to increase by a factor of two the range of lethality of the Sidewinder missile through a product improvement program.

In addition, our modern day aircraft introduce additional stress on missiles and we need to do some structural work on the current Sidewinder missile. We will be able to field this improved Sidewinder missile about 1990.

Commodore **Kelly**. In fact, the improvement will be a plug in the front end of the current Sidewinder. We can make basically an AIM-9 PIP, as we all call it, out of an AIM-9L right now.

TERMINATION OF CAPTOR MINE PROGRAM

Senator **Stevens**. I am told you want to terminate the CAPTOR mine procurement program, but you don't seem to have any new mine development program.

What is the situation there?

Admiral **Altwegg**. We established in the CAPTOR program an inventory objective of some 4,000 weapons. Congress has authorized and appropriated funds for some 2,400 of those weapons. We are unable to afford going forward to the inventory objective that we previously established.

There are some classified reasons why we no longer feel the 4,100 are essential and we are prepared to provide for the record those reasons.

MK-46 LIGHT WEIGHT TORPEDO

Senator STEVENS. Well, on the record, the Navy intends to go into a multiyear procurement of a new MK-46 light weight torpedo.

Admiral ALTWEGG. That is correct. It will be in two pieces. There is a request for 500 new torpedoes, 1986, 1987, and 1988, and in addition, the balance of our inventory, which has not been converted to the MOD-5 version will be converted.

So, it is build new torpedoes and convert those that are not in the latest configuration to that configuration. We expect to save $51 million through that effort.

Senator STEVENS. We may have some questions for the record on that. We will probably have to do it in a classified hearing.

Senator D'Amato.

PREPARED STATEMENT

Senator D'AMATO. Mr. Chairman, I just have a statement for the record I would like to put in.

[The statement follows:]

OPENING STATEMENT OF HON. ALFONSE D'AMATO, A U.S. SENATOR FROM NEW YORK

Mr. Chairman, I am impressed by the increased emphasis of both the Navy and Air Force on implementing sound business practices in weapons and spare parts contracting and acquisition. The cost of purchasing many expensive weapons is being reduced by multiyear procurement, dual sourcing, the breakout of spare parts assemblies, and the establishment of offices in each service to encourage competition. These efforts are now leading to improved weapons and lower unit prices.

The Navy is to be commended for establishing a career corps of naval officers permanently assigned to weapons systems development and acquisition. This initiative will improve the Navy's corporate knowledge necessary to make the best weapons planning and purchasing decisions.

Despite all these improvements, however, the media continues to inform the public of new cases in which the defense department has overpaid for weapons and spare parts. Unfortunately, these reports have had a negative impact on our citizens' support for the defense budget. Many citizens are unaware of the excellent progress being made to improve weapons and spare parts procurement.

Mr. Chairman, I would like to ask both the Navy and Air Force witnesses today to highlight these improvments, and also what they are doing to inform the public of these cost-saving procurement practices.

Thank you, Mr. Chairman.

PUBLIC AWARENESS OF NAVY PROGRAM CHANGES

Senator D'AMATO. I do have one question.

In view of what you have just been discussing with Senator Stevens, some of the corrections that have been made, what has the Navy been undertaking to inform the public as to the changes that have been made?

Admiral ALTWEGG. In what program?

Senator D'AMATO. In terms of your efficiency now in cutting down on some of the problems that have come to the fore.

Admiral ALTWEGG. I think that the initiatives of the Secretary have enjoyed wide publication in the media. I think we have been extremely successful over the last several years in getting more bang for the buck.

Senator STEVENS. Senator, if you will yield, I think the Secretary is to be congratulated for taking the action he did in delaying production out at Hughes until we could get the quality control program back under control.

As I have indicated by my questioning, I am not sure that either the GAO or this committee or the public understood that those defects were under control.

There does seem to be some lack of communication as far as the progess in that quality control program is concerned.

Senator D'AMATO. Mr. Chairman, in my statement I say the Navy is to be commended for establishing dual sourcing, sound business practices in weapons and spare parts, contracting and acquisition.

Costs of purchasing weapons have been reduced, but despite all these improvements, the media continues to inform the public of new cases in which the Defense Department pays excessive cost. Unfortunately, the issue has a negative impact.

I would like to ask the Navy to highlight these improvements. What are you doing to inform the public of these cost saving practices?

I would like the Air Force also to submit answers for the record.

[The information follows:]

PROCUREMENT IMPROVEMENTS AND PUBLIC AWARENESS

The Navy has made numerous improvements in weapons procurement.

First, as the Secretary of the Navy has mentioned in his annual posture statement, we have sought true competition, not merely the appearance of competition through source selection followed by decades of monopoly production. We have pursued a policy of establishing second sources in every appropriate program. We have raised the percentage of competition in our shipbuilding from 15.7 percent in 1980 to 84.3 percent in 1985. We have raised acquisition of all spare parts from only 15.7 percent competitive in 1981 to 28.8 percent in 1984, with a goal of 40 percent in FY 85.

Two years ago we established, at flag rank, a Competition Advocate General reporting to the Assistant Secretary of the Navy. He now has a network of some 300 Competition Advocates throughout the Navy's acquisition commands.

In FY 84 we awarded $14.5 billion competitively, or 37 percent of all Navy procurement dollars. That performance reflected a 54 percent increase over the total dollars we awarded competitively in FY 84. Over 50 percent of all individual contract actions executed in FY 84 were competitive.

In calendar year 1984, the Navy Office of Information made 125 news releases citing positive accomplishments. These included 29 announcements of launching/commissionings of new ships, 32 releases dealing with new developments in hardware, seven releases concerning research and development, and announcement of 10 debarment actions against unscrupulous contractors.

To date in calendar year 1985, 85 news release have been made dealing with nine commissionings/launchings, 12 advancements in hardware development and procurement, seven debarments and suspensions and three major accomplishments in research and development.

In addition, the Navy Office of Information makes Congressional testimony available, coordinates speeches and interviews of senior Navy officials, arranges for media visits to fleet units, and responds to media queries. It must be noted, however, that to many in the media "good news" is considered "no news". In FY 84 the Navy realized cost savings in shipbuilding programs of approximately $2.4 billion, but this fact received much less media attention than the purchase of one hammer from Gould Corporation for $435.

Admiral ALTWEGG. We often find that the media are not interested in the good stories and the successes.

Senator D'AMATO. I give you credit for that. I think you are doing a good job. I think it is becoming a problem in letting the public know because there is so much negativism with respect to military expenditures.

Admiral ALTWEGG. No question. Perhaps we need to do a better job of communicating with the taxpayer our successes.

Senator D'AMATO. I think so.

Thank you, Mr. Chairman.

Senator STEVENS. Thank you, Senator. That is a good comment. We will be pleased to help any way we can and let the public know that we do have these successes in reducing costs and improving quality.

We look forward to working with you in consideration of the 1986 budget.

SUBMITTED QUESTIONS

The committee has a number of questions which we will submit for your written response. They will be inserted in the record at this point.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

Additional Committee Questions

SUBMUNITIONS

QUESTION: The Air Force is requesting $43.9 million for four separate submunitions R&D programs. They are:

Boosted Kinetic Energy Penetrator (BKEP)	$14.8 million
Skeet Submunition	$14.4 million
Extended Range Anti-Armor Munition (ERAM)	$ 1.1 million
Terminally Guided Submissile (TGSM)/SADARM	$13.6 million

What is the requirement for each of these submunitions?

ANSWER: BKEP is required for counter air missions against enemy airfields to reduce his capability to generate sorties to attack our land and air forces. The Skeet Submunition is the submunition for the Sensor Fuzed Weapon (SFW) and is required to provide multiple kills per pass against time sensitive massed armor and other vehicular targets. The Extended Range Antiarmor Munition (ERAM) is an air delivered submunition mine required to delay, disrupt, or divert enemy armor movement. The TGSM/SADARM are Army submunitions that are being evaluated as potential replacements for the Skeet submunition should it run into development problems.

QUESTION: Does each submunition respond to a different target requirement (exclude BKEP)?

ANSWER: Yes. While ERAM and SFW will be employed against the same types of targets they will be employed in different missions. The ERAM as an air delivered mine will be used to delay, divert or disrupt enemy armor and will be effective without keeping aircraft on station. The SFW will be employed in time sensitive situations where multiple kills are required to attack massed armor and other vehicular targets.

QUESTION: What current inventory and production munitions will each replace and how much will the inventory objectives change?

ANSWER: The BKEP when packed in the Direct Airfield Attack Combined Munition (DAACM) and the AGM-130 will supplement the Durandal airfield attack munition just entering the operational force and enhance our counter air mission to reduce enemy sortie generation capability. The Skeet Submunition represents a new capability to effectively attack massed, time sensitive armor and other vehicular targets. The ERAM submunition mine will first supplement and then replace the GATOR mine. The ERAM represents an enhanced capability to delay, disrupt and divert enemy armor with its larger lethal area and ability to track a target and then fire a self forging fragment into the target. The inventory objective for the Durandal and Gator will not change in the near term but would be reduced as the newer submunitions become available in sufficient quantities in the late 1980s. The TGSM/SADARM program at present is evaluating Army submunitions for potential Air Force use.

BOOSTED KINETIC ENERGY PENETRATOR

QUESTION: BKEP is a 45-pound submunition being developed to provide a standoff runway attack capability for the AGM-130, direct airfield attack combined munition and perhaps JTACMS. You plan to initiate FSD in FY 1986, and initial production in FY 1988.

Why was the decision made to accelerate BKEP development?

ANSWER: BKEP full scale development began in second quarter FY 1983 and will be completed in FY 1985. It will be ready for weaponization in FY 1986. BKEP integration into the AGM-130 and Direct Airfield Attack Combined Munition (DAACM) was accelerated to more effectively satisfy the need for a direct attack and standoff attack of airfields and allow us to reduce the quantity of Durandals that would be procured.

RUNWAY/TAXIWAY CRATERING SUBMUNITIONS

QUESTION: Does BKEP by itself meet all your requirements for runway/taxiway cratering submunitions?

ANSWER: Yes. The BKEP, when packaged with airfield denial mines into a delivery vehicle, either direct attack or standoff attack, will meet our requirement for airfield attack. We are procuring the Durandal to provide an airfield attack capability until the BKEP equipped Direct Airfield Attack Combined Munition (DAACM) and AGM-130B are available.

QUESTION: Are you reevaluating JP-233 and its submunition packages?

ANSWER: JP-233 was reassessed in Jan-Mar 84. It was determined that the BKEP would offer more flexibility in direct attack and medium/long standoff systems in DAACM, AGM-130, and TACMS. It was also determined that the HB-876 airfield denial mine submunition component of the JP-233 is an excellent candidate mine to be packaged with BKEP. The HB-876 will be packaged with the BKEP in DAACM and AGM-130 to delay airfield repair efforts.

EXTENDED RANGE ANTI-ARMOR MUNITION

QUESTION: ERAM is a 1,000 pound munition consisting of a tactical munitions dispenser packaged with nine submunitions (mines). The mine senses the approach of an armored vehicle and after detection, launches a self-forging slug.

How will you conduct the FSD effort?

ANSWER: Full Scale Development will begin in late FY 86. Much of the Skeet warhead development will have been completed within the Skeet Submunition development for the Sensor Fuzed Weapon (SFW). The focus of the FSD program will be to make the necessary modifications to the Skeet warhead, complete development of the seismic and acoustic sensors for the mine and then integrate it into the tactical munitions dispenser. The ERAM will be tested against representative armored targets during Development Test and Evaluation (DT&E) and during Initial Operational Test and Evaluation (IOT&E).

QUESTION: Can all FSD be completed prior to transition to production in FY 1989?

ANSWER: FSD will be completed before entering production.

We will continue to assess the readiness for production and will adjust the program as appropriate.

SENSOR FUZED WEAPON AND SKEET SUBMUNITION

QUESTION: The Air Force is requesting $12.6 million for FSD on the Sensor Fuzed Weapon. The SFW is another 1,000 pound weapon consisting of a tactical munitions dispenser package with 40 armor-defeating warhead mechanisms, called Skeet. The Skeet detect targets through an infrared sensor and fires a self-forging slug at the target.

Why does the Air Force require both ERAM and SFW?

ANSWER: ERAM and SFW are required for two different missions. The ERAM will be used as an air delivered mine to delay, disrupt and divert advancing enemy armor and may or may not be employed in time sensitive situations. The SFW is required to provide multiple kills per pass against massed, time sensitive armor and other vehicular targets.

QUESTION: What set of targets can you acquire with ERAM that cannot be acquired with SFW/Skeet? And visa-versa?

ANSWER: Since ERAM is an air delivered submunition mine, it can be dropped along choke points or potential directions of enemy movement and disrupt or slow his movement without the need to keep aircraft in the area. On the other hand, SFW will be employed against time sensitive targets where multiple kills per pass are required either to relieve pressure on our land forces or delay and destroy enemy armor and other vehicular targets before they can enter the battle.

MILLIMETER WAVE SEEKERS

QUESTION: The Air Force is requesting $19.1 million for millimeter wave seekers. This program will develop advanced guidance and warhead components within the millimeter wave portion of the electromagnetic spectrum to meet requirements to attack targets in day or night, and in adverse weather conditions. You recently submitted to Congress a report estimating total program development costs at $250 million. When will more definitive program development costs be made available? What are some of the candidate weapons that could use MMW seekers?

ANSWER: We will be able to refine our cost estimates at the conclusion of the planned ten month Phase I in third quarter FY 86. After evaluating seeker performance and several weaponization concepts during phase I, we will select one or more seeker/weapon combinations for prototype fabrication and demonstration in Phase II. We will examine a variety of candidate weapons including the AGM-130, Maverick, Low Level Laser Guided Bomb, and Penguin.

WASP - LESSONS LEARNED

QUESTION: This technology was successfully demonstrated in the old Wasp program, which was cancelled. What did you learn from Wasp, and how is the R&D base developed from that program being drawn on to support the current MMW seeker program?

ANSWER: The Wasp program proved the feasibility of developing Millimeter Wave (MMW) seekers and the algorithms required to reliably and autonomously lock-on-after-launch. Each of the contractors in the MMW Seekers program will have access to the technical information and results of the Wasp program. The Armament Division (AD), which managed the Wasp effort, is conducting this program. In preparation for this effort AD has consulted with MMW experts throughout industry and the government to insure that the lessons learned in Wasp and related programs are applied directly to the MMW Seeker program.

WASP DEVELOPMENT

QUESTION: If so much development was previously accomplished on Wasp, why is the $250 million program development cost as high as it is?

ANSWER: The Wasp program only completed advanced development. Full Scale Development (FSD) costs were estimated to be nearly a half billion dollars. Although we still must complete FSD of a millimeter wave seeker, by limiting the scope of this effort to existing weapons or weapons currently funded for development we expect our total FSD costs to be significantly less than Wasp.

FLIGHT TESTS OF MMW SEEKERS

QUESTION: You intend to conduct flight tests of MMW seekers in FY 1986. How will the seekers be tested? Will these tests help you more precisely define the program, and select a candidate weapon?

ANSWER: One or more seeker/weapon combinations will be captive flight tested against a variety of surface targets under various conditions. Limited free flight tests may be conducted provided sufficient funds are available. These tests will be used to evaluate the capability and feasibility of various seeker/weapon combinations and to select one or more existing weapons for integration with a MMW seeker.

AMRAAM P^3I PROGRAM

QUESTION: An information paper provided to the Committee indicates that an AMRAAM product improvement effort will start in FY 1987 ($19.1 million). What is being contemplated in the AMRAAM P^3I effort? Why should we proceed with an AMRAAM P^3I program, when FSD on the basic AMRAAM still is to be completed?

ANSWER: The AMRAAM Pre-planned Product Improvement Program (P^3I) was funded in FY 1987 at $19.1 million at the time the FY 1986 President's Budget Request was submitted. Since that time, the Air Force's plan is to reduce that funding to $3.9 million to be consistent with the stretched-out full scale development (FSD) program.

The remaining $3.9 million P^3I budget will be used to partially fund a feasibility demonstration for compressed carriage of the AMRAAM on the Advanced Tactical Fighter (ATF). The technical risk associated with the dense packing of AMRAAM internal to the ATF for launch at supersonic speeds must be addressed prior to the ATF's FSD program. The AMRAAM P^3I effort in FY 1987 will contribute to the reduction of this risk.

Since this effort is not a part of the basic FSD program, is not an improvement to the current missile capabilities, and addresses a new application of the missile, we see no problem with proceeding with this task while the AMRAAM FSD program proceeds.

POWERED GBU-15 BOMB

QUESTION: The Air Force is requesting $55 million in FY 1986 for further development of the rocket-boosted GBU-15. This weapon will be used at standoff ranges to attack point targets and enemy defense sites. Having a 2,000 pound unitary warhead, it will also carry a submunition dispenser with boosted kinetic energy penetrator submunitions to attack runways and airfields. What is the status of the data link, and is this program really ready for an FSD start in first quarter FY 1986?

ANSWER: Yes, the program will be ready for an FSD start in first quarter FY 1986. All preparation activity like program synopsis, contract strategy, threat planning assessment, data link specification and statement of work is on schedule.

FY 1985 DESIGN STUDIES

QUESTION: Do the FY 1985 design studies for integration of penetrators and mines into the tactical dispenser indicate that the system is ready for full scale development?

ANSWER: Yes. The studies indicate that 15 Boosted Kinetic Energy Penetrators (BKEP) and 60 HB-876 area denial mines can be dispensed from the SUU-54 dispenser. BKEP will complete FSD in September 1985 and the HB-876 is in production. This effort is viewed as a low-medium risk integration activity.

PROGRAM CONCURRENCY

QUESTION: How is it possible to go straight from design studies into FSD without having some program concurrency? Is the concurrency in the program acceptable? How would you describe the risk?

ANSWER: There is no program concurrency in the AGM-130B program. FSD initiation is planned the first quarter of FY 1986. DT&E/IOT&E is scheduled to start the first quarter of FY 1987 and the production decision is planned for the third quarter of FY 1988. The Boosted Kinetic Energy Penetrator (BKEP) will complete FSD in September 1985, the HB-876 mine is in production and the SUU-54 dispenser is in inventory. This program is viewed as a low-medium risk integration effort.

ADVANCED CRUISE MISSILE

QUESTION: Explain why advance procurement funding is needed in FY 1986 to support the FY 1987 program when none was needed for the FY 1986 program?

ANSWER: Advanced procurement funding was needed for the FY 1986 program and is contained in the FY 1985 ACM budget. Details have been provided to appropriately cleared committee staff.

AIR LAUNCH CRUISE MISSILE

QUESTION: For the FY 1984-87 period, what are the specific items of ground equipment being bought, their quantities and cost?

ANSWER:

$M (Quantity)	FY84	FY85	FY86	FY87
Electronic Systems Test Sets	13.2*(11)	12.4(8)	2.6*	2.7*
Pylon Loader Adapters	12.1(116)	-	-	-
Suspended Frames	5.1(21)	-	-	-
Altimeter Test Sets	-	1.6(4)	-	-
Munitions Lift Trailers	35.1(70)	22.0(45)	-	-
Dummy Missile Shapes	-	12.1(97)	-	-
Miscellaneous	22.8	11.3	1.9	3.8
B-1/ALCM Compatibility Changes	-	-	19.2	2.2
Engine Depot Equipment	-	-	5.8(100)	-
Altimeter Depot Equipment	-	-	4.9(80)	-
Test Equipment/Software	-	-	-	13.2(66)

* Contractor Support included

AGM-130

QUESTION: What is the planned FY 1986 buy of AGM-130A and AGM-130B?

ANSWER: In FY 1986, the Air Force plans to buy only AGM-130A weapons (a total of 97 weapons). The AGM-130B will not be ready for production until FY 1988.

GBU-15/11R IOT&E

QUESTION: Has the GBU-15/IIR IOT&E been completed? If not, when will it?

ANSWER: IOT&E has been completed and follow-on OT&E is scheduled to start the third quarter of FY 1986.

AGM-130A DT&E/IOT&D

QUESTION: When will the AGM-130A DT&E/IOT&E be completed?

ANSWER: The AGM-130A DT&E/IOT&E will be completed the third quarter of FY 1986.

ECO ALLOWANCE

QUESTION: Since the AGM-130 has a high degree of commonality with existing GBU-15, why is a 17 percent ECO allowance of $4.3 million needed?

ANSWER: The ECO allowance of $4.3 million is approximately 9% of the total AGM-130 FY 1986 procurement request. This is considered normal for a development program. It is an estimate to address changes/fixes identified during development and DT&E/IOT&E. While commonality with the GBU-15 is high, changes, unknown at present but identified through testing, need to be accommodated.

TOOLING AND TEST EQUIPMENT

QUESTION: Specify what tooling and test equipment is being bought and how that increases production capacity of the GBU-15/AGM-130.

ANSWER: No tooling and test equipment was requested for the GBU-15 in FY 1986. For the AGM-130, $16.1 million was requested for tooling and test equipment with the following breakout. Approximately $10.0 million goes for subcontractor initial tooling and test equipment to include the motor and radar altimeter. The remaining $6.1 million is for unique AGM-130 circuit card test station, propulsion unit interface station, adapter unit (houses the radar altimeter and antenna) test station, flight control unit test station and weapon integration test station. This tooling will yield a capacity of approximately 150 units/month. This capacity includes all required rework efforts.

AGM-130 COMMON MODULES

QUESTION: Why are the unit costs of the AGM-130 "common modules" 40 percent more costly than the same items in the FY 1986 GBU-15 program?

ANSWER: The FY 1986 GBU-15/TV procurement request was $18,580,000 for 185 weapons. This equates to approximately $100,000 per unit. The FY 1986 AGM-130A with TV seeker procurement request for common modules was $9,500,000 for 97 weapons. The equates to approximately $98,000 per unit. These unit costs for the common modules are approximately equal.

GROUND LAUNCH CRUISE MISSILE

QUESTION: Explain why the production support costs for FY 1986 increase from $35 million in FY 1984 to $83.5 million. How was the scope of work increased?

ANSWER: Procurement Support (nonrecurring) is subdivided as follows:

($M)	1984	1985	1986
Reliability/Maintainability	$29.1	49.5	73.6
Tooling and Test Equipment	$ 6.1	18.1	9.9
Total	$35.2	67.6	83.5

Reliability/Maintainabillity changes identified during system test and field experience cause the growth in the line item. Improvements to the deficient power generation and communications systems are the two major areas to be changed. The amortization of tooling and test equipment costs also contribute to the increase.

QUESTION: How much of the $67.6 million for FY 1985 production support has been obligated?

ANSWER: $14.8 million of the $67.6 million has been obligated with an additional $26M planned to be obligated within the next 3 months. The remainder of the $67.6 million is required to complete the R&M improvements and fund the tooling and test equipment.

GLCM GROUND EQUIPMENT

QUESTION: For program years FY 1984-87, detail what "ground equipment" has been and is proposed for procurement.

ANSWER: Ground equipment includes: unit and depot level support equipment, equipment for the European Repair Facility, communications terminals, camouflage, nuclear hardness surveillance equipment, and mission planning hardware.

JUSTIFY OTHER COSTS

QUESTION: Justify your requirement for $86.1 million in "other".

ANSWER: The P-12 document shows $87.1 under Flyaway Cost Hardware - Other, under the FY 86 column. Items within this category are:

Launch Control Center - Weapon Control Systems	$20.2M
Transporter Erector Launcher - Weapon Control Systems	$28.5M
Tractor/Trailers	$19.9M
Government Furnished Equipment (Generators, Teletype equipment, Chem/Bio Detectors etc)	$18.5M

NON-RECURRING COSTS

QUESTION: Why has the FY 1985 and FY 1986 non-recurring costs increased from the levels budgeted in the FY 1985 submission?

ANSWER: The non-recurring costs increased due to the requirement for reliability/maintainability (R&M) improvements identified during the test program and initial deployment. Major R&M improvements are planned for the power generation and communications system.

AGM-65D/G IIR MAVERICK

QUESTION: Explain why the requirement for ECO's is increasing on a mature system?

ANSWER: IR Maverick funding reductions in FY 84 were taken out of the ECO line deferring FY 84 engineering changes to later years. In addition, engineering change order funding is required to support the second production source coming on line in FY 86. Engineering changes by the second source will be necessary to assure a producible missile at a competitive price.

MIX OF 65D's AND 65G's

QUESTION: For the FY 1985-90 program, what is the proposed mix of -65D's and -65G's?

ANSWER: The current Air Force budget has the following mix between -65D and -65G missiles.

Quantity	FY85	FY86	FY87	FY88	FY89	FY90
AGM-65D	2,600	3,200	5,100	9,600	11,700	12,000
AGM-65G	0	300	600	600	300	0
TOTAL	2,600	3,500	5,700	10,200	12,000	12,000

COST OF D AND G VERSIONS

QUESTION: What is the difference in cost between the D and G versions? Is that all in the warhead?

ANSWER: The additional cost in FY 86 to convert an AGM-65D missile to the AGM-65G missile configuration is delineated below by component.

Component	*Delta Cost (TY$)
Safe-Arm Device	3,000
300 lb Blast Frag Warhead	6,000
Variable Delay Fuse	11,000
Fuse Delay Selection Unit Processor	1,000
Total	21,000

* Delta cost based on the quanity of 300 AGM-65G missiles procured in FY 86.

IIR MAVERICK MISSILES

QUESTION: How many IIR Maverick missiles have been delivered by month during FY 1985?

ANSWER:

Month	Quantity Delivered
Dec	3
Jan	3
Feb	7
Mar	6
Apr	0
May	7

Deliveries are 12 missiles behind the current plan. Production priorities were temporarily changed during Mar, Apr and May to accelerate the production of 25 ECP604 configured IR Maverick missiles to support FOT&E. ECP604 missiles contain producibility improvements incorporated to reduce unit cost. Converting to the ECP604 configuration combined with slower than expected rework of early production circuit cards (cards produced before the quality shutdown) have put Hughes behind the current schedule. Analysis of work in progress does indicate Hughes is overcoming the circuit card production problems.

VALUE ENGINEERING CHANGE PROPOSALS

QUESTION: Describe all the IR Maverick value engineering change proposals received from the prime contractor to include their projected savings (program and unit), and date of acceptance/implementation.

ANSWER: The value engineering change proposals received from the contractor are presented below. The current program budget takes credit for all savings from changes on contract except VECP718.

VECP'S on Contract

VECP 623 Redesign Video Processing Input/Output Card, Feb 84 - Total savings $65.1 million

Unit Cost Savings	FY83	FY84	FY85	FY86	FY87	FY88	FY89	FY90
	$2,500	$1,600	$1,280	$1,200	$1,120	$1,040	$1,120	$1,200

VECP624 Redesign Correlator Card, Feb 84 - Total savings $45.0 million

Unit Cost	FY83	FY84	FY85	FY86	FY87	FY88	FY89	FY90
Savings	$1,600	$1,120	$800	$800	$800	$720	$800	$800

VECP718 Revise Rate of Acceleration Meter (ROAM) Specification Requirement, May 85 - Total savings $5.8 million

Unit Cost	FY84	FY85	FY86	FY87	FY88	FY89	FY90
Savings	$96	$89	$86	$89	$92	$97	$90

Small $ Value VECPS on Contract (not related to quantity)

VECP 516R Deletion of Spotting Changes, Mar 80 - Total savings $38,000

VECP 606 Change Launch Shock Pulse Test Method, Dec 82 - Total savings $10,000

VECP 622 Deletion of Atlas Language Requirement in Test Requirements Document, July 82 - Total savings $250,000

VECP 669 Revised DC Offset Limit for ROAM, Sep 83 - Total savings $10,000

VECP 690 Delete Requirement for Test Adapter Modification, Sep 83 - Total savings $9,000

VECP's Approved but not yet negotiated

VECP 638 Replace Hydraulic Actuation System (HAS) with Pneumatic Actuation System (PAS) - Proposed savings $185.0 million

VECP 639 Revised Safe Arming and Fuze Unit Requirement - Proposed savings $27.6 million

VECP 694 Redesign Missile Nose Assembly - Proposed savings $7.6 million

VECP 730 Change Rocket Motor Lot Acceptance Test Requirement - Proposed savings $.85 million

Nine additional VECPs reveived but not yet evaluated by the Program Office

HARM ANTI-RADIATION MISSILE

QUESTION: For FY 1985 and FY 1986, identify how much of the "tool/test equipment" money goes to increasing the production capacity.

ANSWER: The following is the funding to buy special tooling and special test equipment (ST/STE) needed to continue the production ramp-up.

	FY 1985	FY 1986
Funds ($ million)	45.4	45.6

QUESTION: What are the monthly 1-8-5 production rates for the years FY 1984 through FY 1987?

ANSWER: The beginning and ending 1-8-5 monthly production rates for the years FY 1984 through FY 1987 are shown below.

	FY 84	FY 85	FY 86	FY 87
Production Rate (monthly)	30-110	110-166	166-270	270-350

TARGET DRONES

Question: For the aircraft modification and flight control computer contracts for the QF-100/QF-106, what are negotiated contract option costs (total and recurring unit) for FY 1985, FY 1986, and FY 1987?

Answer: QF-100s are procured in FY 1985 through FY 1987. Planned procurement is summarized below.

AIRCRAFT MODIFICATION CONTRACT OPTIONS

FY 1985: Two contract options for a total of $7,084,246. Quantity 48, average unit cost $147,588.
FY 1986: Three contract options for a total of $7,696,022. Quantity 48, average unit cost $160,334.
FY 1987: One contract option for $8,466,644. Quantity 48, unit cost $176,388.

FLIGHT CONTROL COMPUTER AND ACTUATOR KITS CONTRACT OPTIONS

FY 1985: $1,900,656 for quantity of 48, unit cost $39,597.
FY 1986: $1,973,712 for quantity of 48, unit cost $41,119.
FY 1987: $2,033,040 for quantity of 48, unit cost $42,355.

TACTICAL REPLACEMENT EQUIPMENT

QUESTION: From which appropriations and budget lines did the $26.9 million and $9.2 million in FY 1984 and FY 1985 funds come from on this new P-1 budget line?

Explain why these items are not funded out of their respective missile production lines as ground or test equipment.

ANSWER: Funds for Missile Replacement Equipment have always been included as part of the budget request, however, they have historically been combined in the Missile Spares and Repair Parts line item. Beginning this year (FY86), Other (Tactical) Missile Replacement Equipment (BP2200) is reflected as a separate line item to more clearly describe and justify these requirements with associated weapon systems.

These items are not funded out of their respective missile production lines as ground or test equipment since they apply to support beyond the initial acquisition phase (in many cases for weapon systems no longer in production). In addition, replacement equipment may be common to several systems or be required for specialized repair activities.

2.75 INCH ROCKET MOTOR

QUESTION: The contract for the fiscal year 1985 program was scheduled for award in December 1984, but has been delayed because (1) the acquisition plan has not been approved, (2) the technical data packages required have not been provided, and (3) the Air Force has not provided funds. The contract is expected to be awarded in August 1985 with deliveries from August 1986 through July 1987.

When does the Single Manager plan to award the contract for the fiscal year 1986 program and over what period will deliveries be scheduled?

ANSWER: FY 1985 procurement request was released to Single Manager (SMCA) in December 1984. The SMCA advised Ogden to cancel the procurement request and reissue to Army Missile Command at Redstone Arsenal, Huntsville, AL. This was done in February 85. We have been advised that Army will award the contract in July 1985. The production will run from January through September 1986. FY 1986 contract option will be exercised in December 1985 and deliveries will start October 1986.

MONTHLY PRODUCTION RATE

QUESTION: What is the contractor's maximum monthly production rate and is it large enough to allow the contractor to produce both programs at the same time?

ANSWER: Production can reach 55,000 per month, well within program needs. Since production will be sequential, no overlap is planned.

ELIMINATING 2.75 INCH ROCKET MOTOR PROGRAM

QUESTION: Should consideration be given to reducing or eliminating the fiscal year 1986 program?

ANSWER: No. There is ample capacity to produce 2.75 inch rocket motors within normal lead times and the Air Force requirements are firm.

30MM CARTRIDGES

QUESTION: Last year GAO reported that if the request for 2.288 million 30mm individual-use HEI cartridges was approved, the asset position for individual-use HEI would exceed the inventory objective by about 3 million cartridges at the end of the fiscal year 1985 program. Because the inventory objective for individual-use HEI was reduced for the fiscal year 1986 program, the asset position will now exceed the inventory objective by about 4 million cartridges if the fiscal year 1985 program is produced. In October 1984, the Air Force provided about $34.7 million to the Single Manager for Conventional Ammunition (SMCA) to fund the production of the fiscal year 1985 program of 2.288 million individual-use HEI cartridges.

The multiyear contracts for the 30mm cartridges include cancellation clauses which specify that if the fiscal year 1985 programs had been cancelled on or before December 31, 1984, the maximum cancellation costs to the government could not exceed about $2 million. Since the cancellation costs were known and the fiscal year 1985 program of 2.288 million individual-use HEI cartridges will be excess to Air Force needs, why didn't the Air Force and SMCA cancel the contract under this cancellation clause?

ANSWER: Based on the SMCA analysis of impacts on contracting costs, the total costs weighed against benefits appeared marginal at best. Taken into consideration were such things as cancellation of all multiyear contracts, cost of new single-year contracts, cost impacts to all vendors including container suppliers, taking title to and management of all parts already bought (management required to be outside of standard mechanized systems), and later providing those parts as GFM. The minimal potential savings involved would not justify the massive manual effort required.

DOLLAR INCREASE FOR HEI CARTRIDGES

QUESTION: The contractors indicated that if the fiscal year 1985 program for individual-use HEI cartridges was deleted from the contract, the cost for combat-mix cartridges would increase. Honeywell estimated a cost increase of $6 million to $8 million while Aerojet did not cite a specific dollar amount. Did the Air Force and the SMCA obtain a specific estimate of the dollar increase from Aerojet for combat-mix cartridges and did the Air Force and the SMCA develop a cost estimate of the additional costs to the government for shipping, receiving and storing the excess HEI cartridges resulting from the fiscal year 1985 program?

ANSWER: Aerojet did not provide a firm estimate on cancellation; SMCA estimated it at near or higher than Honeywell. Storage costs for the Air Force on the completed HEI rounds would be less by a significant amount than handling on a manual basis all the small bits and pieces resulting from a cancellation. Plus, we will then have a usable complete HEI round which would not require intensive management as would the collection of smaller parts.

CANCELLING CONTRACTS FOR HEI CARTRIDGES

QUESTION: Both multiyear contracts could still be terminated for the convenience of the government; however, the maximum termination costs specified in the cancellation clauses no longer apply because the dates included in the clauses have passed. Should the Air Force and the SMCA still consider cancelling the fiscal year 1985 requirement for individual-use HEI cartridges?

ANSWER: Nothing has changed to indicate original assumptions are invalid. It is estimated that the Government would incur up to $29 million costs for incomplete rounds. The entire 30mm individual-use HEI procurement for fully functional rounds is $32.2 million.

USE OF HEI CARTRIDGES AS GFM

QUESTION: The Air Force plans to use the excess HEI cartridges as GFM on the fiscal year 1986 and outyear programs for combat-mix cartridges. However, the Air Force has already used about 41,000 excess HEI cartridges on the fiscal year 1983 program for combat-mix.

Has the Air Force determined whether excess HEI cartridges can be used as GFM on the fiscal year 1984 and 1985 combat-mix programs?

ANSWER: The use of 30mm HEI as GFM on current and prior year combat-mix programs is being investigated with the Single Manager for Conventional Ammunition (SMCA) and is being pursued.

FISCAL YEAR 1982 AND 1983 COMBAT-MIX PROGRAMS

QUESTION: Has the Air Force taken actions to use excess HEI cartridges as GFM on additions made to the fiscal year 1982 and 1983 combat-mix programs?

ANSWER: As previously answered, until the Single Manager for Conventional Ammunition (SMCA) investigation of contractual options is complete, no further action on GFM 30mm HEI can be taken.

FISCAL YEAR 1985 AND 1986 REQUIREMENTS

QUESTION: Has the Air Force informed the Navy that their fiscal year 1985 and 1986 requirements for HEI cartridges could be satisfied with HEI cartridges excess to Air Force requirements?

ANSWER: No. The Air Force GAU-8 ammunition is not compatible with Navy SDN 30mm guns. Therefore, Navy requirements cannot be met with Air Force excess.

RR-170 CARTRIDGE CHAFF

QUESTION: Air Force tests identified about 4.4 million deficient cartridges produced by Tracor for the fiscal year 1981 through fiscal year 1983 programs. The Air Force and Tracor are currently negotiating a settlement for the deficient cartridges.

Have the Air Force and Tracor reached a settlement agreement concerning the deficient cartridges? If so, specify the terms.

ANSWER: No. This case is being handled by the Federal Court. The Air Force position is that full replacement is required.

REPLACEMENT OF DEFICIENT CARTRIDGES

QUESTION: If the Air Force does not require Tracor to replace the deficient cartridges, can they be used for training?

ANSWER: The Air Force has a significant war readiness shortfall that must be filled. To accept deficient cartridges and use for training would fill over ten years of annual training requirements while leaving combat deficiencies unsolved. The Air Force position thus is to seek full replacement.

ACCEPTANCE TESTS

QUESTION: Has the Air Force determined why the acceptance tests performed by the Defense Contract Administration Services failed to identify the deficient cartridges?

ANSWER: The previous DCAS inspector has been reassigned. There may be additional information forthcoming from the legal investigation performed for the Federal prosecution. Due to current active status of this legal action, such answers are case sensitive and should be the prerogative of the Government attorneys.

DURANDAL

QUESTION: Durandal -- a near-term airfield attack weapon -- is manufactured in France by Matra. Through 1990, the Air Force expects to buy 20,015 weapons at an estimated cost of $659.2 million. To date, the Air Force has procured the weapon sole source, but it will consider a U.S. licensee for manufacture of Durandal for the fiscal year 1986 quantities.

What plans are underway to have a U.S. licensee produce Durandal?

ANSWER: The Air Force stated that MATRA might approve a license for U.S. production but went on to say that because of the small quantity of Durandals planned, it was unlikely the license approach would be advantageous. Further, no U.S. company wanted to invest in the tooling necessary to produce Durandal when the procurement was done on a yearly basis with no guarantee of follow-on procurement.

Currently there are no plans to procure Durandal from U.S. license.

PRODUCTION LINE BREAK

QUESTION: A new contract is required for fiscal year 1986 procurement. What plans are being undertaken to preclude this contract break from resulting in a production line break?

ANSWER: No production break is anticipated. The procurement responsibility will be moved from Air Force Systems Command (AFSC) to the Air Force Logistics Command (AFLC) in FY 1986 in the normal course of events as a system completes development and initial production. The two commands have, and are, coordinating the transfer to insure there is no production break. For example, Ogden ALC has released the FY 1986 advance purchase request in order to overcome the extensive administrative lead time contained in this program. This extremely early action should preclude any production break for FY 1986 program.

DURANDAL ADDED COST

QUESTION: If a break does occur, what will be the added cost to the Air Force? How will it affect the planned procurement of Durandal?

ANSWER: Minimal. A production break of one or two months might affect unit cost and result in fewer Durandals procured. However, it should be noted that the U.S. is not the only country buying Durandals (six other countries buy Durandal), and it's unlikely a break in U.S. procurement would cause a production break.

DURANDAL FOLLOW-ON TESTS

QUESTION: Durandal follow-on tests were designed to determine the weapon system's operational effectiveness and suitability. The tests were concluded in August 1984 and the results are expected to be released in April 1985. Anomalies such as mutual interference during bomb release occurred during these tests.

Did the anomalies during the all-up-round demonstrations indicate reliability, effectiveness, or suitability problems?

What actions has the Air Force taken to correct the mutual interference problems?

ANSWER: Overall results of the tests determined that the Durandal is both effective and suitable. In the effectiveness portion of the tests, minimum intervelometer settings were determined and ballistics parameters were refined and validated. In the suitability portion of the tests, maintainability, logistics supportability, and reliability were evaluated. Problems with transport tie-down procedures, errors in the preliminary technical orders, and aircraft loading times were identified. However, analysis determined these problems to be minor and correctable. The final test report is currently at the printers and should be distributed in June.

FISCAL YEAR 1986 UNIT COST

QUESTION: Fiscal year 1985 program actual unit costs are $22,333 and the budgeted unit cost for the fiscal year 1986 program is $27,132.

Although unit prices are subject to change because of fluctuating exchange rates and French inflation, one would expect the Durandal unit costs to decrease because of Matra's production experience and increases in U.S. quantities. Why is the fiscal year 1986 unit cost significantly higher than the fiscal year 1985 actual unit costs?

ANSWER: Durandal unit costs reflect an assessment of all influences in this area (it is dependent upon fluctuating exchange rates, French inflation rate, MATRA's production experience, and change in quantities). Neither the US or MATRA can predict the currency exchange rate/French inflation rate accurately. The FY 1985 and FY 1986 unit costs were calculated using the best exchange and inflation rate available at the time. However, these rates have been volatile and thus introduce uncertainty in forecasting Durandal cost even a year in advance. For example, our predicted FY 1985 unit cost was $26,556 while the actual cost is $4,223 less (16 percent less than predicted). If the French inflation rate and exchange rate continue to favor the US, then a decrease in unit cost could be expected.

DURANDAL'S FOLLOW-ON CANDIDATES

QUESTION: The Air Force is pursuing alternatives to Durandal. The nearest follow-on system is the Boosted Kinetic Energy Penetrator (BKEP) which could be fielded in the late 1980's with such carrier weapons as AGM-130 and tactical munitions dispensers that would be used in the Direct Airfield Attack Cluster Munition (DAACM) system.

What is the current status of Durandal's follow-on candidates?

When are these system(s) expected to be fielded?

ANSWER: The Boosted Kinetic Energy Penetrator (BKEP) is in full scale development. The critical design review has been concluded. BKEP will be integrated into the Direct Airfield Attack Combined Munition (DAACM) and the AGM-130.

The current plan is to begin full scale development of DAACM and AGM-130 with the BKEP in FY 1986. Production of the AGM-130 with BKEP is planned for the third quarter of FY 1988, and DAACM production is planned for the fourth quarter of FY 1988.

ACCELERATION OF BKEP AND ITS CANDIDATE CARRIERS

QUESTION: Can development of BKEP and its candidate carriers be accelerated to limit procurement of Durandal?

ANSWER: The DAACM development could be accelerated with additional funding in FY 1986 to allow an earlier start of full scale development. Production of DAACM to replace the Durandal could then occur in the first quarter of FY 1988.

TIMER, ACTUATOR, FIN AND FUZE

QUESTION: The August 1985 production decision and the February 1986 limited production start date are both dependent on the completion of the time, actuator, fin and fuze (TAFF) initial operational test and evaluation testing on the B-1B aircraft.

If the test program for the TAFF is delayed, will this affect the delivery schedule of the 5,000 timers scheduled for 1986?

ANSWER: If the TAFF testing on the B-1B is delayed significantly, the TAFF delivery schedule will be impacted. Depending on extent of delay, deliveries may begin in FY 1986.

TAFF TEST ON THE B-1B

QUESTION: Have tests been conducted on the B-1B aircraft? If so, what were the results? If not, when are they scheduled?

ANSWER: No. There were 25 releases from the B-1A aircraft with good results. The B-1B flight tests of MK82s and TAFFs are scheduled for Feb-Jun 1986.

PLANS FOR PRODUCING THE TAFF

QUESTION: What are the Air Force's current plans for producing the TAFF in fiscal year 1986 and does the service have sufficient confidence that the system is ready for production?

ANSWER: The Air Force is confident that after sufficient testing is successfully completed, a production decision can be reached in January 1986 and Low Rate Initial Production (LRIP) can be made for the TAFFs in FY 1986.

BSU-49 and BSU-50 AIR INFLATABLE RETARDER

QUESTION: Although the imbalance of retarders and laser guidance kits compared to reliable fuzes will improve slightly if the funds requested for the FMU-139 are provided, shouldn't consideration still be given to decreasing the number of retarders requested so that the imbalance will be corrected sooner?

ANSWER: The majority of retarders requested in FY 1986 are for training requirements (49,458 of 51,392 BSU-49s and 2,000 of 9,300 BSU-50s) which can be safely used with inventory M904 nose and M905 tail fuzes. Therefore, there would be no significant advantage to reducing the number of retarders requested. We do not believe the current imbalance of retarders with preferred fuzes is an issue given sufficient alternate fuzes are available in the inventory. Outyear programming will fully correct the imbalance.

TARGETBUSTER WEAPON SYSTEM

QUESTION: The initial Targetbuster procurement is to be used with the GBU-10 guidance kit, thereby limiting weapon delivery to a high altitude, steep angle attack profile causes unacceptable aircraft attrition rates in a high threat environment such as Central Europe.

Can the Targetbuster weapon system be deployed in both a high and low threat environment?

ANSWER: Yes. The weapon system can be employed in high and low threat environments in all delivery tactics currently used by the GBU-10/MK-84 bomb weapon. Using these tactics, the weapon provides a significant increase over the GBU-10/MK-84 in destructive capability against hardened targets, while retaining current capability against softer targets. The GBU-10/BLU-109/B will require fewer sorties to destroy a given hardened target than a GBU-10/MK-84. Although several targets require high altitude delivery, GBU-10s can be effective down to an altitude of 2000'. For example, launching at 2000' altitude would produce a target impact condition sufficient to penetrate a four foot thick vertical concrete target. Current programs for interfacing warhead to the GBU-15 and GBU-24 are underway. The GBU-24 interface should be verified during FY 1986 and will be produced in FY 1987. This will provide the Air Force with improved low level attack capability to complement the GBU-10 capability provided in FY 1986.

EFFECTIVENESS OF TARGETBUSTER

QUESTION: Will Targetbuster be operationally effective if proposed guidance systems cannot provide the proper attack angles for low-altitude delivery?

ANSWER: The GBU-15 and GBU-24 guidance systems provide effective attack angles for the warhead throughout their delivery envelopes. The initial operational capability using the GBU-10 guidance kits will provide a substantial operational enhancement even though the GBU-10 has a limited low level capability.

DELAY OF PRODUCTION COMMITMENTS

QUESTION: Should further production commitments be delayed until Targetbuster has been fully tested and evaluated using realistic operational delivery profiles and low-level guidance systems?

ANSWER: No. Because of the rapid build-up of enemy hardened facilities, an initial, though limited capability is needed now. The GBU-10 profiles are realistic even if they are not preferred. We have tested the warhead 26 times on the sled track and will have accomplished a total of 45 sled tests prior to award of the

FY 1986 quantity. These tests have already proven the ability of the warhead to penetrate hardened targets at the angles and speeds it will be delivered at by either the GBU-10, the GBU-24 or the GBU-15. We have also conducted eight DT&E/IOT&E flight tests which have verified the ability of the weapon to interface with both the GBU-10 and the GBU-15. Prior to award of the FY 1986 quantity, we will have conducted at least 34 flight tests to further confirm the capabilities of the warhead when combined with various guidance systems. We have already tested the warhead with the GBU-15 at a low level launch (1500') -- the warhead performance was very good. The FY 1986 procurement of 1000 warheads will bring the BLU-109/B inventory to a total of 1300 warheads. This minimum quantity is essential. The improvements will verify the GBU-24 and GBU-15 interfaces, improve warhead producibility and provide for multiple fuze time delays. These efforts involve no changes to the basic warhead design. The interface efforts require the design of some metal parts to couple the systems together and flight testing to verify the design does not impact the performance of either the guidance system or the warhead. Substantial design, wind tunnel testing and GBU-15 flight testing to date indicate that the planned improvements will have no impact on the warhead design.

TARGETBUSTER PROCUREMENT QUANTITIES

QUESTION: The Targetbuster 2,000-pound warhead is designed to defeat hard targets that cannot be destroyed by the current MK-84 bomb as well as targets that can be defeated by the MK-84. At this time, the Air Force has not determined if Targetbuster will replace all MK-84 bombs or have limited applications. In addition, the Air Force plans to develop (1) a 1,000-pound warhead which would be 80 percent as effective as the 2,000-pound bomb and (2) a rocket-boosted hardened target munition to meet future threat changes.

In view of the current Targetbuster program uncertainty and planned improvements, can the Air Force realistically determine inventory objectives and yearly procurement quantities for the Targetbuster?

ANSWER: Air Force can and has determined the inventory objectives for the BLU-109/hardened target weapon and the annual procurement profile. The procurement objective is based on guided applications and unguided applications to replace the MK-84 where the I-2000 is uniquely capable. Additionally, the 1000 pound warhead will be developed for applications where the I-2000 is impractical. The rocket-boosted hardened target munition will be developed for targets which neither the I-1000 nor the I-2000 will penetrate. These two developments will not affect the procurement objective of I-2000.

TARGETBUSTER OPERATIONAL CAPABILITIES

QUESTION: Describe the impact on overall operational capabilities if the Targetbuster program was delayed until the Air Force has evaluated the program requirements and determined product improvement priorities. Explain.

ANSWER: The GBU-10/MK-84 is typical of current operational capability. Against a target protected by a one meter horizontal slab of reinforced concrete, analysis shows that the Air Force will have to expend eight GBU-10/MK-84 weapons to destroy the target. This could require eight passes over the target. In IOT&E testing, the GBU-10 guided BLU-109/B warhead has demonstrated its capability to take out the same target with a single weapon. A delay in the program would require during wartime for the Air Force to expend multiple sorties with an ineffective weapon against vital targets.

IMPROVED TARGETS

QUESTION: Will the Air Force provide improved targets to adequately test the Targetbuster and the follow-on weapons?

ANSWER: The Air Force has provided realistic targets to adequately test the weapon. These targets far exceed any used by any service to date. In one test, the warhead penetrated a 3-foot layer of dirt, a 2-foot layer of reinforced concrete, a 7-foot layer of dirt and a 4-foot layer of reinforced concrete. The warhead penetrated through the target then traveled an additional 1/2 mile down range. The inventory MK-84 would have failed to penetrate the first concrete layer. The Air Force plans to continue the construction of additional realistic concrete targets to further test the warhead with other guidance systems and to test other hardened target weapons currently in development or planning. A separate task, Targetbuster Effectiveness Test, beginning in FY 1987 and continuing throughout the 1990s, will acquire or locate replica threat targets (including caves, rock rubble, mountain landslide areas) for further testing. This testing will develop and validate models to provide effectiveness and reliability data in convenient forms for operational usage to enhance the use of these weapons.

NATO INTEROPERABILITY STANDARD

QUESTION: Air Force weapon developments are supposed to meet the NATO standard for reliability, sustainability and interoperability. The first 1,300 I-2000 bombs, however, will not meet the NATO interoperability requirement and the follow-on systems will require special interface hardware to accommodate other guidance units such as GBU-15 and GBU-24. How and when does the Air Force plan to meet the NATO interoperability standard for the Targetbuster program?

ANSWER: The only non-NATO standard systems procured will be the limited quantity of 1300 to provide an initial operational capability. Note that the GBU-10 coupled warhead uses lugs with the standard NATO spacing. However, to preserve the penetration capability of the warhead, the lugs are attached such that it would not weaken the case. The lugs permit the weapon to be loaded on the MAU-12 rack which is standard on the F-4, F-111 and many other aircraft including a large number of NATO aircraft. Outyear programs are planned to meet NATO interoperability standards.

INTERFACE HARDWARE

QUESTION: Will the fiscal year 1987 procurement have the necessary interface hardware? If so, how much will this add to the unit cost?

ANSWER: FY 1987 procurement plans will include necessary interface hardware for other guidance systems. For example, the interface for the GBU-24 consists of a metal ring spacer for the nose, a metal strongback with the NATO lugs, and a plastic fairing for the aft section. A similar set of simple parts will be required for the GBU-15. Initial interface kits are estimated to add $2,000-$2,500 to the unit cost of a weapon, depending upon producibility/cost reduction results.

EQUIPMENT INTERFACE

QUESTION: Will the Targetbuster program be responsible for the equipment interfaces necessary for other guidance units or will the other programs assume this responsibility? Explain the rationale for the Air Force's planned approach.

ANSWER: The design of the interface hardware, as well as systems testing, will be a joint effort by the Armament Division conducted under the individual guidance system program office (SPO) (i.e., GBU-24 or GBU-15) with support from the Targetbuster program. A Joint Interface Control Working Group (JICWG) has been created to establish and maintain configuration control of the interface design. In addition, the GBU-15 and GBU-24 SPOs are currently members of the BLU-109/B Configuration Control Board (CCB). Interface testing will be conducted under the individual guidance SPO.

INTERFACE HARDWARE DEVELOPMENT

QUESTION: If interface hardware development is to be done by Targetbuster, what type of coordination efforts will be needed to insure success?

Has the Air Force evaluated the relative advantages and disadvantages of this approach?

ANSWER: Tentative designs for the GBU-15 and GBU-24 interface have been completed and fabricated. Wind tunnel and some flight testing has been performed. Under the leadership of the GBU-15 and GBU-24 System Program Offices (SPOs) (with support from the BLU-109/B SPO), these interfaces will be improved for better producibility and verified in additional flight tests. The BLU-109/B, GBU-15 and GBU-24 SPOs all report to the Deputy Commander for Research, Development and Acquisition, Armament Division. In addition to the JICWG and the CCB described before, arrangements are being formalized for managing the interface to insure the continued success of the BLU-109/B program. Memoranda of Agreement (MOAs) between SPOs will clearly document responsibilities of each organization, plans, schedules, and funding requirements.

The USAF has considered alternative means of accomplishing required tasks and has determined that this offers the soundest managerial approach for continuing the development which has been very successful to date.

FY1986 TARGETBUSTER PROCUREMENT REQUEST

QUESTION: The fiscal year 1986 Targetbuster procurement request contains $180,000 for Single Manager for Conventional Ammunition (SMCA) support fees. According to the Program Manager, Targetbuster procurement will not transition to the Single Manager until fiscal year 1987 or 1988.

Is the Air Force Targetbuster request overstated by $180,000?

Do Air Force program estimating procedures require an allowance for the Single Manager fee on all programs whether they have transitioned or not?

ANSWER: FY 1986 President's Budget request for BLU-109/B weapon does not include funding for SMCA support fees. Funding requested is required to acquire the 1,000 weapons in the submission.

Planning allowances were included in the earlier DOD internal review. These allowances were deleted when decision was made to delay transition to a later date.

MANAGEMENT RESERVES AND ECOs

QUESTION: On some Air Force programs such as the improved 2,000 pound bomb, the budget estimates include lines for engineering change orders and proposals as well as "management reserves". Generally, both of these costs are for unanticipated requirements within a program.

Specifically, what is the difference between the management reserve lines and engineering change order lines included in program estimates?

ANSWER: Every development program has a number of risks associated with it. Estimates of production costs made before the system has completed development (and before the design, configuration, materials, processes, schedules, etc., have been definitized) are most sensitive to these risks and uncertainties. In addition, it must be recognized that they are just that -- estimates. They represent forecasts of future dollar requirements and carry with them the uncertainties and limitations of the techniques and data bases used in developing the estimates. These uncertainties are real and history shows that whenever such uncertainties appear during the development phases of a program, they materialize by the time the program reaches the production stage. Therefore, risk funds are an important and necessary part of some estimates and resulting budgets. There should not be lines in cost and budget estimates to cover "unanticipated program needs"; but as discussed in our above reply, there is a valid need for a line that provides an estimate for future ECOs that history has shown are bound to occur. Contingency fund accounts should not be included in cost and budget estimates; however, it is essential that both risk, i.e., cost, schedule and technical risk, and future ECOs be considered in arriving at a best estimate of the ultimate cost of a program.

ECO/ECP's LINES

QUESTION: Since Air Force reports to the House Survey and Investigation Staff indicate that a 5 percent factor is generally adequate for ECO/ECP's lines, what is the justification for adding additional contingency funds as management reserves?

ANSWER: Regarding the five percent factor, what constitutes an adequate allowance for ECOs must be examined on a program by program basis. A 5% factor may be high for some programs but low for others. The time phasing for ECOs is also an important consideration. As for the improved 2,000-pound bomb the requested ECO is 4.7 percent. No additional management reserve funds are included in the budget request for this item.

OVERSTATING HARDWARE COSTS

QUESTION: Although some program estimates now show management reserves as a separate line item, the Air Force Systems Command has provided guidance that, in the future, these funds will be allocated to the hardware lines for the programs.

By including "reserve" funds as a part of the hardware costs, isn't the Air Force overstating its "best estimate" of hardware costs?

ANSWER: The budget estimate for the improved 2000 bomb does not include lines for management reserves and engineering change orders. The two lines cited were included in an earlier, preliminary, and unofficial estimate. The tentative nature of this early estimate was clearly identified. The management reserve identified in the preliminary estimate was an assessment of the risk associated with the program at that point in time. ECO/ECP is an "estimate for contract changes based on such things as historical precedence, i.e, safety of flight, correction of deficiencies, and value engineering". ECO is a reserve for known/unknown contract changes. It does not include reserves for changes in requirements. It is a reserve over and above allowances for risk. On the other hand, in those cases where a "management reserve" has been identified, it has really been a misnomer for the risk associated with a program.

EXCESSIVE MANAGEMENT RESERVES

QUESTION: How will the Air Force insure that management reserves included in budget and cost estimates are not excessive?

ANSWER: The management reserves associated with a given item are thoroughly evaluated, quantified, and documented by a group of experts with the most knowledge of the item. This includes the design engineers, program analysts, cost analysts, and the program manager. Reviews are held by AFSC product division management and all levels of command within the Air Force to periodically audit this area of program management to assure that management reserves match the degree of uncertainty and risk as closely as is feasibly possible, considering the maturity of the program and the confidence level of the assessment date.

DECREASE IN ECO/ECP LINES

QUESTION: Will allocating reserves to the hardware lines result in a corresponding decrease in the ECO/ECP lines for programs? If not, why not?

ANSWER: Each line is estimated at its most likely or most probable cost. However, if a budget or cost estimate included risk in the ECO line, and the estimate were revised to reflect Command policy, the amount by which the hardware and other element costs increase should be matched by a corresponding decrease in the ECO line.

HISTORICAL EXPENDITURES FOR THE ECO/ECP LINES

QUESTION: What are the historical expenditures for the ECO/ECP lines for such programs as the GBU-15, CEM, and Gator? Provide a comparison showing ECO/ECPs, "additional management reserves" included in Presidential budget submissions, the amounts reserved after appropriations, and the "actual expenditures" made from these funds for unanticipated program requirements since 1980.

ANSWER: Following is a comparison of estimated ECO (as a percentage of recurring costs) included in the President's Budget and the actual ECO for each of the applicable years for GBU-15, CEM and Gator. None of those programs included "additional management reserves" in the President's Budget.

	FY82	FY83	FY84	FY85
GBU-15				
Estimate	3	3	1	1
Actual	3	3	5	TBD
CEM				
Estimate		0	5	5
Actual		3	1	TBD
Gator				
Estimate	0	4	4	0*
Actual	0	4	3	0*

*Transferred to Ogden ALC and has no ECO requirement
TBD = To be determined

GBU-15

QUESTION: During initial operational testing, the GBU-15 imaging infrared seeker (IIR) has experienced seven system misses out of eleven launches. The most recent failures occurred during the last four launches. On the ninth launch, the miss was caused by a data link malfunction.

Has the Air Force identified and corrected all technical problems experienced during operational tests?

ANSWER: Four potential technical problems were identified during the Initial Operational Test and Evaluation for the GBU-15 IIR weapon seeker. We had a switchology problem on one launch; it has been redesigned. The data link malfunctioned on one launch; this has been identified as a random reliablity failure requiring no correction. The weapon system appears to have a downward bias; more testing is required to identify the cause and solution. There appears to be an operator/weapon interface problem, possibly relating to the infrared representation; more testing is required to definitize this problem.

DATA LINK PROBLEM

QUESTION: Is the data link problem severe enough to require changing designs and retrofitting those units already produced?

ANSWER: No. The data link failure during IOT&E was a random reliability failure. All testing, including the GBU-15/TV test results support the assessment that the data link is performing as designed.

RETEST OF THE GBU-15

QUESTION: Will the Air Force retest the corrected GBU-15 in the failure modes experienced in operational tests? If so, when?

ANSWER: Yes. Extensive captive carry testing will begin in the first quarter of FY 1986 with four launches using updated residual equipment to be completed by March 1986. Two 20-weapon follow-on test programs, one by AFOTEC and one by TAC, will use production hardware starting the third quarter FY 1986.

REPORT ON OPERATIONAL TESTS

QUESTION: What did the Air Force Operational Test and Evaluation Center conclude in its report on the operational tests?

ANSWER: AFOTEC tests identified some technical weapon problems. These problems have been corrected or require additional testing to identify the cause/solution. Test set and technical data deficiencies were identified and corrective action has already been implemented. The possible operator/weapon system interface problem requires additional test data.

GBU-15 IIR FOLLOW-ON TEST PROGRAM

QUESTION: The Air Force currently plans to conduct a GBU-15 IIR follow-on test program with approximately 20 launches. However, delivery of test equipment necessary for follow-on testing will not be available until at least October 1986.

What is the status of the GBU-15 follow-on test program with respect to start date, number of launches, and completion date?

ANSWER: The Air Force procured enough GBU-15/IIR assets in FY 1985 for an extensive follow-on test program. Extensive captive carry missions and four launches using updated residual hardware will be accomplished by March 1986. Then, around the third quarter FY 1986 a 20 weapon test program will be conducted using production hardware by AFOTEC. This will be followed around 2Q FY 1987 by another 20 weapon test program conducted by TAC.

FOLLOW-ON TEST RESULTS

QUESTION: Will the Air Force rely upon follow-on test results to determine the resolution of technical problems identified during operational tests?

ANSWER: Any future testing will be directed at resolving difficulties identified in prior testing.

FULL RATE PRODUCTION

QUESTION: Given the results of operational tests and the projected follow-on test schedule, does the Air Force believe it has sufficient data to begin with full rate production in fiscal year 1986?

ANSWER: At this time, sufficient data is not available to support a full FY 1986 production. However, we are keeping our FY 1986 options open. If a decision is made to reduce the GBU-15/IIR procurement in FY 1986, we would propose to compensate with an increase in GBU-15/TV weapons since the requirement for both the TV and IIR versions is far from being satisfied.

DATA LINK BUYS

QUESTION: According to the Air Force, Hughes will have to procure four semiconductors from government inventories in order to produce data links for the fiscal year 1984 buy. However, sufficient quantities of the semiconductors are not currently available.

Does the Air Force or Hughes have a plan to ensure the availability of these items in quantities sufficient to complete fiscal years 1984, 1985, and 1986 data link buys?

ANSWER: In fiscal year 1984, the Air Force has given Hughes permission to procure the four semiconductors from government inventories. The Defense Electronic Supply Center (DESC) indicates there are sufficient quantities to satisfy this requirement. For fiscal years 1985 and 1986, the contractor has already ordered sufficient quantities of three of the four semiconductors from commercial vendors. The fourth semiconductor is no longer in production. However, a circuit redesign and a commercial equivalent are currently being evaluated with one of the two options projected to be available for the fiscal years 1985 and 1986 requirements.

COST IMPACT ON DATA LINK CONTRACT

QUESTION: Will purchasing these items from government inventories have a cost impact on the data link contracts?

ANSWER: Impact on the data link contract will be negligible.

PURCHASE OF SUBSTITUTE PARTS

QUESTION: If Hughes finds it necessary to purchase substitute parts for those currently specified, what will be the potential impact on system performance?

ANSWER: Performance requirements will not change with either a circuit redesign or component substitution.

FISCAL YEAR 1983 GBU-15

QUESTION: Deliveries of the data link from Hughes, as well as the autopilot and target detection device from Rockwell continue to be late. The fiscal year 1983 data link deliveries were to have been completed in November 1984, but the Air Force now expects completion in March 1985. In addition, fiscal year 1983 autopilot and target detection device deliveries were to have been completed in January 1985, but the Air Force now projects completion of those deliveries in April 1985.

Is the fiscal year 1983 GBU-15 buy now complete? If not, why?

ANSWER: The fiscal year 1983 GBU-15 buy is not complete. The weapon data link deliveries were delayed due to a circuit redesign, additional vendor qualification for a diplexer and power amplifier, and extensive screening and quality audit procedures. The data link problems have been resolved and deliveries were completed in April 1985. Guidance modules and autopilot deliveries were delayed due to problems in integrated circuit card soldering. Corrective actions have been taken with schedule recovery for the autopilots in April 1985 and for the guidance module in June 1985.

AUTOPILOT AND TARGET DETECTION DEVICE

QUESTION: Has the start of fiscal year 1984 data link, autopilot and target detection device deliveries been delayed?

If these deliveries continue to slip, what will be the potential impact on delivery of future buys (fiscal years 1985 and 1986)?

ANSWER: Yes, some were delayed. We expect the fiscal year 1984 buy to be back on schedule by June 1985 for autopilot deliveries and August 1985 for guidance module deliveries. Data link deliveries were completed in April 1985.

Future buys (fiscal years 1985 and 1986) will not be affected since delivery delays will be recovered within the fiscal year 1984 buy.

GBU-15 PRODUCTION RATE

QUESTION: According to Air Force budget documents, Rockwell and Hughes will have to exceed their normal production capacity to produce the budgeted quantities for fiscal years 1985 and 1986. Based on a normal rate of 50 units a month, 1,200 GBU-15s can be produced over the 2 year period but 1,350 units have been programmed.

Why does the Air Force feel it necessary to produce GBU-15s at a rate exceeding normal contractor capacity?

Would it be more economical to program production within normal contractor constraints?

ANSWER: The contractor is currently tooled to support a minimum production rate of 50 units per month. The most efficient production rate with current facilities is 60 to 65 units per month. Contractor capacity is not being exceeded.

Production is programmed within the current contractor capacity. It is more economical to produce at the most efficient production rate when feasible.

GBU-IIR FULL PRODUCTION RATE

QUESTION: In fiscal year 1985, the Air Force planned to produce 300 each of the TV and IIR GBU-15s. Instead, because of delays in the IIR test program, the Air Force procured 325 TV units. The program is now scheduled to transition completely to the IIR version in fiscal year 1987.

If the GBU-15 IIR is not ready for full rate production in fiscal year 1986, will the Air Force again procure additional TV units instead? If so, how can an imbalance in the mix of TV and IIR weapons be avoided?

ANSWER: Yes. Any potential reduction in planned GBU-15/IIR weapons in FY 1986 will be compensated for by an increase in GBU-15/TV weapons. Because this is a modular weapon, any potential imbalance in the mix of TV and IIR seekers can be corrected within the AGM-130 procurement.

IIR PRODUCTION DELAY

QUESTION: In the event of an IIR production delay, would it be better to maintain TV production only as currently planned and defer full rate production of the IIR?

ANSWER: Because the requirement for the GBU-15 is far from being satisfied, it is better to procure additional GBU-15/TV weapons in the event of an IIR production delay. This approach would provide much needed precision guided weapons to the Tactical Air Forces at the earliest possible time. The mix of seeker modules can be adjusted in the future.

STATUS OF IR MAVERICK PRODUCTION

QUESTION: The IIR Seeker component of the GBU-15 is being procured through the Maverick System Program Office. Production of the Maverick Seeker, which is largely common with the GBU-15 version, was halted in August 1984 to enable the contractor (Hughes) to develop and complete a quality improvement plan. Hughes restarted production of the Maverick missile around December 1984. What is the status of IR Maverick production and delivery?

ANSWER: Hughes is making satisfactory progress in their quality improvement program; however, deliveries are 12 missiles behind the current schedule. Production priorities were temporarily changed to support FOT&E. This priority change combined with slower than expected rework of early production circuit cards (cards produced before the quality shut down) have put Hughes behind the schedule. Analysis of work in progress does indicate Hughes is overcoming the circuit card production problems.

MAVERICK SEEKER PRODUCTION SHUTDOWN

QUESTION: Has the Air Force assessed the potential impact of the Maverick seeker production shutdown on the GBU-15 version? If so, what were the results?

ANSWER: Yes, the impact has been assessed. The shutdown and resumption of the Maverick seeker production had no impact on planned deliveries of the GBU-15 seekers.

PRODUCTION OF THE GBU-15

QUESTION: If production of the GBU-15 seeker is delayed because of the Hughes shutdown, will the Air Force reduce production of other components to match delivery of the seeker? Explain.

ANSWER: There is no need to reduce production rates of other GBU-15 components since the Hughes' shutdown had no effect on GBU-15 seeker deliveries.

BOMB PRACTICE 25-POUND

QUESTION: This budget line includes the BDU-33 practice bomb and the BDU-48 practice bomb. Since the request includes over $1 million for each type bomb, why wasn't a separate budget line used for each type bomb?

ANSWER: The BDU-48 practice bomb is a complementary extension to the BDU-33 practice bomb in the current training syllabus; the BDU-48 providing a high-drag, retard fin and the BDU-33 providing a low-drag, conical fin bomb delivery profile. The requested program was combined in a single line since it supports this unified requirement.

CBU-89/B GATOR MINE SYSTEM

QUESTION: Overall the Tactical Air Command (TAC) plans to only procure enough FZU-39/B fuzes for about 50 percent of the total Gator procurement. However, the initial procurements including the fiscal year 1986 request include one fuze for each Gator.

Should consideration be given to reducing the number of FZU-39/B fuzes requested for the fiscal year 1986 program?

When does TAC plan to reduce the FZU-39/B requirement?

ANSWER: Tactical Air Command (TAC) has reiterated their requirement for 100 percent FZU-39/B in FY 1986 buy. Reduction should not be made. The TAC indicates that reductions in FZU-39/B requirement cannot be made prior to FY 1988 due to the small inventory. Full flexibility for users is critical to the operational scenarios.

GATOR OPERATIONAL PLANS

QUESTION: Do operational plans which involve the Gator specify the method of delivery, and if so, do they indicate the number of FZU-39/B fuzes needed?

ANSWER: Air Force operational planning scenarios do identify the method of delivery for Gator and based on these operational plans the number of FZU-39/B sensors required are computed. However, once sufficient FZU-39/B sensors are available to the Tactical Air Forces to allow for operational flexibility, quantity procurements of FZU-39/B will be reduced.

PROCUREMENT LEAD TIME

QUESTION: The procurement lead time for the fiscal year 1986 program is 22 months, an increase of 5 months from the fiscal year 1985 request. Why did the lead time increase?

ANSWER: Lead time estimate is from the Single Manager for Conventional Ammunition (SMCA) for their first buy and is an estimate, which could be improved. There will be a learning curve within the SMCA organization on this buy.

ADMINISTRATIVE PROCUREMENT LEAD TIME

QUESTION: There are several items for which the procurement lead time increased by 3 months, e.g., 2.75-inch rocket, 30mm, 40mm, MK-82 Inert and BDU-33. The increase is attributable to the administrative portion of procurement lead time. Why has administrative time increased?

ANSWER: The competition advocacy requirement is resulting in additional time needed to develop additional sources, qualify them and for solicitations. FY 1986 request reflects SMCA provided realistic adjustments to the administrative portion of procurement lead time.

CBU-87 COMBINED EFFECTS MUNITION

QUESTION: Written testimony provided the Committee last year indicated that CEM had a reorder lead time of 21 months. The lead time consisted of 6 months administrative lead time and 15 months manufacturing lead time. Program officials now state that a 24-month reorder lead time comprised of 11-months administrative and 13-months manufacturing lead time is necessary.

Why has the CEM lead time increased by 3 months since last year's testimony? Doesn't Air Force policy require attempts to reduce lead times rather than increase them?

ANSWER: The FY85 President's Budget lead time of 21 months was in error. The correct lead time is 24 months as shown in the FY86 President's Budget. It has been Air Force policy to keep lead time to a minimum; however, recent legislation affecting procurement and contracting procedures, such as the mandated approval levels with low thresholds for sole source justifications and warranties, and other policies implemented to enhance competition have lengthened administrative leadtimes.

ADMINISTRATIVE LEAD TIME FOR CEM

QUESTION: Why does CEM, which requires only one contract for the whole system, require almost three times more administrative lead time than the more complex Gator system, which requires numerous contracts?

ANSWER: The administrative lead time previously described includes approximately 3 months of negotiating time which is required to negotiate the Total Systems Performance Requirement (TSPR) aspects of the program, including the lot acceptance testing plan, and the terms and conditions of the 10-year product performance agreement. These are new items to both prime contractors and require a great deal of careful hard-nosed negotiations. These are not features of a Gator breakout approach. The D&F for the Gator breakout process with the Army did not require the long process of obtaining Air Force approval of the D&F and acquisition strategy. In addition, the Army expedited awards using letter contracts.

MANUFACTURING LEAD TIME

QUESTION: From what date does Air Force consider manufacturing lead time to begin--e.g., fully executed contract date, effective date of contract, mailing date of contract, or some other date?

ANSWER: Manufacturing lead time begins when: the Air Force and the contractor reach agreement on all terms and conditions of the contract; the Air Force contracting officer establishes an effective date for incurring obligations; or the contractor issues his purchase requests to all his vendors and suppliers. If this starts prior to the date of a fully executed contract, then the contractor is proceeding at his own risk in the event the contract is not signed by the government.

TOTAL SYSTEMS PERFORMANCE PRECLUDE SINGLE MANAGER

QUESTION: Program management responsibility transfer to the Army Single Manager for Conventional Ammunition is scheduled to occur during the third quarter of fiscal year 1986.

Considering the substantial investments made in tooling and facilities, doesn't the Air Force's acquisition strategy of total systems performance preclude the Single Manager from utilizing component breakout in the most economical manner?

ANSWER: Component breakout is not excluded. The strategy for production is to obtain a fixed price arrangement, lot acceptance at the system level (system flight tests for acceptance/rejection of lot) and a 10-year product performance agreement. If the Army breakout approach can achieve contractor acceptance of Government Furnished Equipment (GFE) while still maintaining TSPR acceptance at system level and Product Performance Agreement (PPA), then breakout can be used.

TOTAL SYSTEM PERFORMANCE APPROACH

QUESTION: Has the Single Manager concurred in writing to continue the total system performance approach?

ANSWER: The Deputy Under Secretary of the Army has stated in a memo to the Assistant Secretary of the Air Force for Research, Development and Logistics that the Army will continue the TSPR approach through FY 1987 and any requests to deviate from this approach for FY 1988 and 1989 will be fully coordinated with the Air Force.

TOTAL SYSTEMS PERFORMANCE CONCEPT

QUESTION: Additional weapon systems are currently planning to utilize the same components used in the CEM. Does the Air Force plan to purchase these systems under the total systems performance concept? If so, won't this methodology require the Air Force to duplicate wrap charges for each system?

ANSWER: As systems become more and more complex, the Air Force is planning on total systems performance acquisition. This methodology will not duplicate wrap charges in that during negotiation, only those contractor charges where value is added will be accepted. Once the Air Force and contractor obtain confidence in component/subsystem performance at rate production and after initial deliveries to the inventory, then component breakout with GFE may be possible while maintaining TSPR.

SECOND SOURCE METHODOLOGY

QUESTION: The CEM acquisition strategy includes a leader-follower role for production with a product performance agreement (warranty) included.

Isn't open competition stifled by the directed second source methodology being utilized for the CEM procurement?

ANSWER: The CEM second source was not directed. All CEM contractors were competitively selected. Open competition is not being stifled. In fact, competition has been expanded by the Air Force requirements to develop a separate supplier base for every component down to the piece part level with the second source producer.

ENSURE TRUE COMPETITION

QUESTION: What precautions are being taken to ensure true competition will occur from year-to-year since both the prime and second source producers are each guaranteed a percentage of the buy?

ANSWER: Past experience indicates that head to head prime competition results in cost savings (e.g., 30 MM). At the present time, no equations have been drafted by the Army for CEM for the FY 87 and beyond buys guaranteeing any specific minimum percentage to the two prime producers. For these buys, the government will develop sufficient constraints on the potential economic split to drive the contractors to give us the lowest possible price.

10-YEAR WARRANTY ON AMMUNITION ITEMS

QUESTION: What benefit does the government get from 10-year warranty on ammunition items?

ANSWER: From a 10-year product performance agreement developed for the CEM, the government is attempting to ensure that the weapon will be built with high reliability to obtain the best overall warfighting effectiveness for the full 10 years and beyond. The contractor is liable (payback, additional units, retrofit) for the full life of the warranty if the system does not meet surveillance test requirements.

The advantages of a warranty are already being demonstrated with improvements in the system and higher reliability from contractor initiated, long term storage testing and product improvements. As a result of this, the BLU-97 bomblet function rate and first article acceptance testing has exceeded the 95%. New materials have been developed for use in the submunition Attached Inflatable Decelerator (AID) to eliminate potential high temperature thermal setting of the plastic material. These efforts are concrete verification that the warranty is paying off.

WARRANTY VERSUS COMPONENT BREAKOUT

QUESTION: What methodology was used to determine the advantages of a warranty versus component breakout? Was an independent analysis done on these options?

ANSWER: A Cost Benefit Analysis was performed by Armament Division comparing return on investment versus estimated warranty costs.

NON-OPEERABLE TEST UNITS

QUESTION: Will the government be reimbursed by the contractor if after 5 years a non-test unit is taken from storage and found to be non-operable?

ANSWER: In the event the CBU-87/B systems or subsystems delivered under this contract fail to meet the function rate requirements specified in the product performance agreement, the contractor shall perform remedies selected by the government. Under the CEM product performance agreement, the government can pull for testing operational weapons from any storage location worldwide. The government can test these weapons under the product performance agreement, and if found not to meet the performance requirement stated in the product performance agreement, the government can be reimbursed up to the full amount of money established in the contractor liability for the product performance agreement.

COST OF 10-YEAR WARRANTY

QUESTION: How much is the 10-year warranty going to cost over the entire buy of CEM? What will the maximum liability of the contractors be over the entire CEM buy?

ANSWER: The contractor was requested to bid with and without a PPA and he did not bid additional costs for the PPA. The product performance agreement for the FY 1984 buy does cost the government $1.4M to be used for teardown and testing over the 10-year period. All of these funds are for engineering and test support. The liability of the contractor starts off on year one at 95% of his profit and decreases to 40% of his profit by year ten.

NUMBER OF WEAPONS TESTED

QUESTION: How many weapons will be tested each year under the warranty? Does the number of weapons tested for warranty increase based on production increases? Explain.

ANSWER: The CEM product performance agreement testing will include teardown and testing of a single weapon for each year of the 10-year period. Additionally, 30 CEMs will be flight tested in the time periods 3-4 years, 6-7 years and 9-10 years. The government, if they so elect, can accelerate these triennial tests. The number of weapons (30 for the triennial test) provide statistical confidence in the test results regardless of the production size for that year. The Air Force would normally test approximately 20 CEMs per year under present inventory surveillance testing.

ADVANTAGES OF CEM MULTI-YEAR CONTRACT

QUESTION: What are the advantages of implementing a multi-year contract for CEM versus competing the contract for the remaining 4-year buy?

ANSWER: No final decision has been made on the business strategy for the Combined Effects Munition (CEM) for FY87 and the out-years. Like all production programs within the Air Force, the CEM is being screened for the potential application of the expanded multiyear contracting technique. As a part of the screening process we will carefully measure each program against the multiyear selection criteria. Programs which survive this screening process within the Air Force will be submitted to OSD during the FY87 budget preparation process. If OSD in turn supports the candidate, it will be submitted to the Congress complete with a full justification package, as a part of the FY87 budget.

In the case of CEM, the screening process described above will include an analysis of the competitive nature of the program. It is likely that any multiyear strategy for the CEM would include multiyear awards to both contractors following a competitive solicitation. If this strategy were followed, the winner of the competition would receive a higher quantity of units than the other source. This approach would allow us to combine the EOQ buying benefits of multiyear with the basic efficiency of competition. If a decision is made to pursue a CEM multiyear in FY87 full documentation will be submitted with the budget request.

COORDINATION OF MULTI-YEAR CONTRACT

QUESTION: Was the multi-year contract proposal coordinated with the Single Manager?

ANSWER: No final decision has been made on the business strategy for the Combined Effects Munition (CEM) for FY87 and the out-years. Like all production programs within the Air Force, the CEM is being screened for the potential application of the expanded multiyear contracting technique. As a part of the screening process we will carefully measure each program against the multiyear selection criteria. Programs which survive this screening process within the Air Force will be submitted to OSD during the FY87 budget preparation process. If OSD in turn supports the candidate, it will be submitted to the Congress complete with a full justification package, as a part of the FY87 budget.

In the case of CEM, the screening process described above will include full discussion with the Army to ensure they will follow through with any long term business strategy structured by the Air Force.

PROCUREMENT OF CEM WITH TWO FUZES

QUESTION: The CEM is being procured with two fuzes which perform the same function.

What is the cost for each fuze?

Are any product improvements being planned for a single fuze in lieu of using two? If not, why not.

ANSWER: The CEM does not have two fuzes. The dispenser has an integral fuze and a proximity sensor to provide high altitude release capability. Under the FY 1984 initial low quantity production contract with Aerojet, the FZU-39/B costs $4,428 per unit. The average Unit Program Cost is estimated at $1,722.

OPERATING 1/8/5 SHIFT

QUESTION: Planned production quantities for the fiscal year 1986 buy may require at least one if not both contractors to operate on a 2/8/5 shift. In comments on the need for using a 2/8/5 shift, the Air Force stated that a 2/8/5 operation was the most efficient and would result in unit costs being about 10 percent lower than costs associated with a 1/8/5 operation.

What is the basis for the Air Force's comment that a 2/8/5 operation is the most efficient approach when historically a second shift operates at an efficiency rate of only 80-90 percent of a first shift operation?

ANSWER: A 2/8/5 second shift operation normally doesn't produce the same quantity of units as a single shift 1/8/5 due to the need to conduct maintenance on the production line sometime during the second shift. However, running this 80-90% capacity second shift results in cost benefits of approximately 10% due to utilization of the common overhead for both shifts such as heating, cooling, lighting, etc.

UNIT COST OF 2/8/5 SHIFT

QUESTION: Provide detailed support showing that a 2/8/5 shift for CEM production will result in unit costs that are 10 percent less than those expected for a 1/8/5 operation?

ANSWER: By going to a second shift you do not duplicate the entire overhead associated with the first shift resulting in a savings of about 7-8%. The remaining 2-3% results from a reduction in the required support services such as plant guards, efficiencies and utilities, administration services, etc.

UNIT COST OF 1/8/5 SHIFT

QUESTION: What would the additional cost be to increase the 1/8/5 capacity at each plant to a level adequate to produce units on a 1/8/5 basis versus the difference in unit cost of operating on a 2/8/5 basis over the entire buy?

ANSWER: To increase the capacity to the 2/8/5 capability on a 1/8/5 basis will require approximately $30-50M additional facilitization costs to tooling and test equipment.

PURCHASE OF CEM IN 5 YEARS

QUESTION: Planning documents and production schedules indicate that a 2/8/5 shift will be necessary to purchase quantities to meet Five Year Defense Plan requirements?

Why is it necessary to purchase the entire quantity of CEM in 5 years?

Why couldn't the buy be stretched out for a 6-year period thus allowing a 1/8/5 operation to maintain a warm industrial base longer?

ANSWER: It is directed by the DOD defense guidance to procure the required quantity of CEM during the Five Year Defense Period. Extended buyout will increase unit price and therefore total system life cycle cost.

This requirement was developed by DOD to allow the U.S. to remedy the near-term shortfall in readiness and substantiate our warfighting capability in the 5 year period. The CEM has been determined to be a mobilization base item as a principal weapon of conventional warfare to be procured over the 5-year period. If the buy were stretched out over a longer period, this requirement capability would not be achieved and unit price would be higher. A warm production base will be maintained beyond five years as quantities are procured to meet the total inventory objective.

SURGE PRODUCTION CAPABILITY

QUESTION: The CEM acquisition plan indicates surge capability will be built into the CEM program in fiscal year 1986.

When will surge production capability be sufficient to reduce production leadtime to less than 6 months as identified in the acquisition plan?

When will expansion capability be complete to allow a design rate of 1,000 CBU-87s per month for the two sources?

ANSWER: Procurement of long lead items for wartime surge production is included in OPAF P-1 line 309. This funding provides capability to accelerate and sustain a surge production rate within six months. Peacetime production leadtime will remain as planned since long lead items will be retained for wartime surge needs.

Expansion capability for a design rate of 1000 CBU-87s per month will be complete for both CEM prime contractors for the entire FY 1986 buy.

ECOs FOR CEM

QUESTION: The CEM acquisition plan indicates technical risk for this program is low.

Since the technical risk is very low for CEM, why is it necessary to budget engineering change orders at a 5 percent rate?

ANSWER: The Air Force is not requesting five percent ECO/ECP for CEM. FY 1985 ECO/ECP funding is at four percent and FY 1986 ECO/ECP funding is at three percent levels.

DECREASE FOR ECO's/ECP's COSTS

QUESTION: Since the warranty provisions of the contract provide for the contractor to pay for deficiency corrections found in the CEM, why couldn't the amounts budgeted for ECO's/ECP's be decreased? Explain.

Does the ECO/ECP estimates decrease for future production quantities? If so, at what rate? If not, why not?

ANSWER: From a 10-year product performance agreement developed for the CEM, the government is attempting to ensure that the weapon will be built with high reliability to obtain the best overall warfighting effectiveness for the full 10 years and beyond. The contractor is liable (payback, additional units, retrofit) for the full life of the warranty if the system does not meet surveillance test requirements.

The ECO/ECP estimate is the Government's share of cost risk associated with product or process changes. These changes can be anticipated when the CEM production progresses from low rate, handline, to high rate, automated assembly, or due to changes in the competitive subvendor production chain. As the CEM production matures, after the first full rate procurement, and transitions to SMCA for follow-on procurement, the ECO/ECP requirement is dropped.

MJU-7B, IR, FLARE-PRODUCTION LEAD TIME

QUESTION: Budget documentation for the MJU-7B flare shows a 17-month lead time, however, the production schedule is based on an 18-month lead time because the computer used to determine requirements for ammunition items is programmed to accept lead times in quarter increments (multiples of 3 months). Since the actual lead time is only 17 months, 1-month's production will extend beyond the funded delivery period.

Why can't the computer that is used to compute requirements for ammunition items be programmed to accept lead times which are not in quarter increments?

ANSWER: This real computer problem will be corrected in the new Combat Ammunition System (CAS) computation module scheduled for test use in June/July 1985.

ACTUAL PROCUREMENT LEAD TIME

QUESTION: If the computer cannot be reprogrammed to accept actual lead times when they are not in quarter increments, shouldn't the production still be scheduled based on the actual lead time instead of the inflated lead time required by the computer to determine requirements?

ANSWER: The actual lead time will be used to schedule the production, and under the new system, mentioned above, the problem is corrected.

INCREASE IN PROCUREMENT LEAD TIME

QUESTION: Why did the procurement lead time increase from the 14 months used in prior year's budget requests?

ANSWER: The current 18-months lead time is correct.

The Single Manager for Conventional Ammunition (SMCA) increased from 13 months to 16 months on their lead time submission due to competition requirements and actual experience.

RAPID ASSEMBLY OF MUNITIONS SYSTEM

QUESTION: The Air Force's second production buy for the Rapid Assembly of Munitions System (RAMS) will be exercised in fiscal year 1986 at an estimated hardware cost of $2.181 million with an additional $1.4 million for engineering change orders and proposals (ECO/ECP).

Why is a 64 percent ECO/ECP required for a simple mechanical system that is in its second year of production?

ANSWER: At the point in time which the funding levels were identified, there were some unidentified procurement requirements and uncertainties in production costs that existed with the program. Foremost within this unidentified procurement requirement was the potential need to procure air compressors as Contractor Furnished Equipment (CFE) to pneumatically power the system and to deliver an all-up system to the user.

Now, the air compressors will be provided as Government Furnished Equipment (GFE) rather than CFE, leaving a surplus of funds within the RAMS funding line. However, the user recently advised of some previously unidentified requirements. His total requirement is now 139 RAMS of which 118 are budgeted for, leaving an unfunded requirement of 21 RAMS ($950,000). Once funds are appropriated we would propose increasing quantity to fully fund requirement.

JUSTIFICATION FOR RAMS

QUESTION: The justification for RAMS is that it will provide a bomb assembly capability necessary to meet wartime sortie rates. The inventory objective for this item is 118 units.

What is the bomb assembly capability using existing techniques and what percentage improvement will RAMS provide in terms of manpower and time?

ANSWER: As stated above, the revised inventory objective is 139.

Bomb assembly capabilities today require building bombs on 4x4 wooden dunnage on the ground, within their shipping pallets, or on munitions trailers. At best, using two 15-20 person crews supporting 24 tactical fighter aircraft, the TAF could assemble no more than 500 MK82 bombs in a 24 hour period. The RAMS will allow two 15 person crews to assemble up to 1400 MK82 bombs in a 24 hour period. Present bomb assembly methods vary from base-to-base because no standardized assembly equipment exists.

BASIS FOR PROCURING RAMS

QUESTION: What is the Air Force's basis for procuring 118 RAMS to assemble the munitions needed to meet sortie rates?

ANSWER: The basis of issue (BOI) for the RAMS is as follows:

a. TAC - 1 per deploying package
b. NGB - 1 per deploying package
c. PACAF - 21 total
d. AFRES - 1 per deploying package
e. ADTAC - 1 per 57 Fighter Interceptor Squadron
f. AAC - 2/24 PAA Air-to-Ground Squadron
g. USAFE - 1 per Air-to-Ground Squadron
    1 per WRM set for mobility

STUDIES ON RAMS REQUIREMENTS

QUESTION: What studies has the Air Force conducted to show that the quantities of RAMS projected are necessary to meet wartime sortie requirements?

ANSWER: While there have been no specific studies conducted by the Air Force to validate the quantities of RAMS to meet wartime sortie rates, we have conducted two exercises to verify potential production rates. The quantities have been determined to support various Oplans, i.e., USAFE SUPPlan 4409.

Of our two Leading Edge exercises, Leading Edge I, an F-4 deployment without RAMS, would not have met aircraft sortie/bomb production rates beyond day two. On the other hand, Leading Edge II, an F-16 deployment with RAMS, established high bomb production rate early and maintained them in a wartime scenario. All fighter aircraft squadrons with air-to-ground missions are scheduled to be equipped with RAMS.

WARTIME OPERATIONS FOR RAMS

QUESTION: Provide supporting information showing the bomb assembly requirements and aircraft to be served by RAMS during wartime operations?

ANSWER: RAMS is being procured to provide the Tactical Air Forces (TAF) the capability of mass producing general purpose (GP) bombs and cluster munitions (CBU) for all applications in an extremely efficient manner to support combat operations in all theaters (i.e. USAFE, PACAF and SWA). RAMS is essential to provide the capability to assemble munitions in the quantity needed to support planned aircraft sortie rates. Evaluations of a production RAMS demonstrated a capability to build a GP bomb nearly 50% faster than the conventional technique. This production rate (one bomb every 40 seconds) will permit assembly of sufficient ordnance to meet the most demanding surge requirements during the early phases of a conflict. The columns below represent the near term prepositioned requirements for GP bombs and CBU's.

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Actual daily assembly requirements will vary by the type of aircraft supported, munitions configuration, and sortie rates. Delivery aircraft include all current tactical fighter aircraft (e.g. A-7, A-10, F-4, F-15, F-16, F-111)

FMU-130 LOW DRAG BOMB FUZE TESTS

QUESTION: One of the primary justifications for the FMU-130 low drag bomb fuze was its improved timing accuracy as compared to the M-904 and M-905. However, limited testing of the latter fuzes, of which the Air Force has over three million in stock, showed that their delay elements worked as required. The Air Force plans additional tests to determine comparative fuzing accuracy.

Has the Air Force completed the comparative fuzing tests between the M-904/M-905 and the FMU-130? If so, what were the results?

ANSWER: The limited testing of the M-904/M-905 delay elements were tests of only those delay elements, not the assembled fuzes, and were conducted under laboratory conditions. The next step is to test fully assembled fuzes in June-July 1985 against soft and hard targets to determine accuracy of delays of the M-904/M-905 fuzes. FMU-130 Initial Operational Test and Evaluation (IOT&E) was completed in May 1985. Initial analysis confirmed 114 successful fuzes out of 118 releases. To date, the cause of the the four unsuccessful detonations has not been determined.

FY 1986 PRODUCTION OF FMU-130 FUZE

QUESTION: Have the results of these tests caused the Air Force to reevaluate their need for the FMU-130 fuze? What course of action does the Air Force plan to take regarding the FY 1986 production of the fuze? Explain.

ANSWER: The testing conducted to date confirms the need for the FMU-130. Delayed detonations during the Southeast Asia conflict when using the M-904/905 fuzes have not been experienced with the FMU-130. This was the major rationale for developing the FMU-130. In addition, it is designed to be far more logistically supportable, in that it achieves the same reliability as the M-904/905 nose/tail dual fuzing with only one fuze. Arming wires are eliminated and the seventeen-piece stock and assembly required for the M-904/905 is replaced by the one-piece design of the FMU-130. Production decision for the FY 1986 procurement is currently planned for Oct 1985.

IMPROVEMENT FOR THE FMU-130 FUZE

QUESTION: As presently designed, the FMU-130 is compatible only with low drag general purpose bombs, but the Air Force is considering an improvement program for the fuze to operate with high drag bombs.

What is the Air Force's justification for entering initial production with a fuze that the service already has plans for changing. Wouldn't it be more cost effective to delay production of the FMU-130 until the dual capability is available? Explain?

ANSWER: The feasibility of a dual capability will be tested in September 1985. This is a pre-planned product improvement program which would require approximately two or three years to develop and procure, if it is determined to be actually feasible. This effort does not detract from the need to replace the M-904/905 fuzes which are aging, are logistically difficult to support, and demonstrated inaccurate time delays during the Southeast Asia conflict; those inaccuracies led to the requirement for the FMU-130. As in all product improvement programs, the intent is to balance current needs with potential improvements which can be incorporated several years hence.

REQUIREMENTS FOR LOW DRAG BOMBS

QUESTION: What percentage of the Air Force's mission will require low drag bombs? That is, the overall trend seems to be toward the use of low level, high speed attack tactics in which low drag bombs and fuzes cannot be used. Also, explain the Air Force need for a new low drag fuze when over 3 million such fuzes are now in the inventory.

ANSWER: Low drag bombs constitute 15% of the Air Force requirement for air-to-surface weapons. These bombs will be used on missions where specific target characteristics, weather and defenses combine to make the low drag bomb the most effective munition.

The FMU-130 is an integral one piece design mechanical impact nose fuze. During recently completed Strategic Air Command testing it demonstrated higher reliability with single fuzing than the dual fuze combination of the M-904/905. Safety is enhanced by the elimination of all external arming wires while weapons effects is improved by more accurate function times. Logistics cost and time are reduced both by the reduction in unique fuze parts and by using single fuzing instead of the more complicated dual fuzing.

DECREASE IN NEED OF FMU-130 FUZE

QUESTION: Since the Air Force's projected needs for the FMU-130 decreased from about 1 million fuzes per year to about 100,000 per year, what is the basis for entering production for the unit at this point in time?

ANSWER: There have never been any plans to procure 1 million fuzes per year. Planning has always been to prove out the production line and procure 100,000 fuzes per year. SAC has a stated operational need for the FMU-130 and 100,000 fuzes annually is considered to be an economical approach to meeting this requirement.

FMU-139 BOMB FUZE SAFETY PROBLEM

QUESTION: The Air Force has identified a safety problem with the FMU-139 fuze. The fuze could select the wrong arming time delay, thereby jeopardizing the delivery aircraft.

What is the status of the Air Force and Navy actions to resolve this problem?

What limitation, if any, will have to be imposed on the delivery aircraft to ensure that the fuze will not detonate prematurely and destroy or damage the aircraft?

ANSWER: The level of deceleration in the drogue sensor has been changed so high drag delivery will not be detected in error during a low drag, high speed release. This change has already been incorporated in the design, and the FMU-139 has been cleared for flight with these modifications to flight envelopes and constraints: a) high drag fuzing is restricted to tail only rather than nose/tail; b) BSU-49 minimum airspeed was changed from 250 to 280 knots; c) MK-82 maximum airspeed was changed from 700 to 600 knots; d) MK-15 Snakeye minimum airspeed was changed from 310 to 275 knots; e) FMU-139 fuzing on laser guided bombs (LGBs) restricted to nose fuzing only (no nose/tail fuzing). Headquarters TAC has accepted the new speed envelopes and has requested further testing and analysis to remove the LGB restriction.

RESOLVING THE SAFETY PROBLEM

QUESTION: Will resolution of the fuze safety problem involve design changes to the fuze? If so, what are these changes, and to what extent will such changes impact the ongoing and planned production program?

Since the safety problem with the FMU-139 also applies to the FMU-112 fuze, what actions would the Air Force take if the safety problems cannot be resolved quickly?

ANSWER: The high drag drogue sensor has been changed so high drag delivery will not be detected in error during a low drag, high speed release. Before the safety issue emerged, the Air Force production decision was planned for February 1985. The safety issue delayed limited production decision until May 1985 and full production decision until September 1985. However, since then, a reliability issue has emerged during the first phase of Initial Operational Test and Evaluation (IOT&E) which has delayed those two milestones approximately three months. The FMU-112 still has the safety restriction, and it has not been determined yet whether it is cost effective to modify the small quantity (2000) of inventory FMU-112 fuzes.

DELAY IN FMU-139 OPERATIONAL TESTS

QUESTION: The safety problems associated with the FMU-139 have resulted in another delay in the Air Force's planned operational tests and may also further delay the obligation of funds appropriated in fiscal years 1984 and 1985.

What were the results of Air Force tests to determine the seriousness of the FMU-139 safety problem?

ANSWER: The Air Force testing resulted in these corrective actions which have been implemented: a) raise the high drag deceleration sensor level to ensure a low drag condition would not be detected in error during a high speed, low drag delivery; b) restrict high drag fuzing to tail only rather than nose and tail fuzing; c) limit delivery envelopes of certain weapons fuzed with FMU-139 (BSU-49 minimum speed was changed from 250 to 280 knots airspeed; MK-82 maximum speed was changed from 700 to 600 knots; MK-15 Snakeye minimum speed was changed from 275 to 310 knots); d) FMU-139 fuzing on laser guided bombs (LGBs) restricted to nose fuzing only (no nose/tail fuzing). Headquarters TAC has accepted the new speed envelopes and has requested further testing and analysis to remove the LGB restriction.

RESULTS OF OPERATIONAL TESTS

QUESTION: If operational tests have begun, what are the results? If operational tests have not begun, when are the tests scheduled?

ANSWER: Initial operational testing has begun; 69 fuzes have been evaluated. Nine fuzes failed to detonate. Seven of these were recovered and analyzed; three failed due to a connector interface problem, three due to quality control problems and one for an undetermined reason.

IMPACT OF SAFETY PROBLEM

QUESTION: What impact is the problem expected to have on the completion of operational tests and the exercise of options for the fiscal years 1984 and 1985 quantities?

ANSWER: The limited production decision to exercise the 1984 option is anticipated September 1985, which represents a delay of three months. The Air Force will complete Initial Operational Test and Evaluation (IOT&E) prior to the full production decision for procurement starting with the FY 1985 option. The decision is planned for December 1985.

UTILIZATION OF FY 1986 FUNDS

QUESTION: In view of the delays already incurred in committing prior year funds to the contract and the likelihood for additional delays, can the Air Force efficiently utilize the funds requested for the program in fiscal year 1986? Explain.

ANSWER: Yes, the funds can be efficiently used because the contractor will have a capacity of producing 150,000 fuzes per year for the Air Force and Navy (approximately 75,000 for the Air Force). The Air Force requirement for FY 1984 and FY 1985 combined is less than that: 25,000 in FY 1984, and 47,000 in FY 1985. The required quantity of FMU-139s justifies a second source, which the Air Force and Navy considers important to reduce cost through competition. The Navy is beginning second source contracting in 1985, and the Air Force option to the second source contract begins in 1986.

DELAY IN EXERCISING OPTIONS

QUESTION: The Air Force has experienced delays in committing funds to the FMU-139 program to the extent that delivery of some quantities being requested in FY 1986 will exceed the funded delivery period.

Specifically, what problems caused the delays in exercising options for Air Force quantities.

Does the Air Force currently believe the problems are resolved and that the funds appropriated can be committed to the contract? If so, what evidence leads the Air Force to this conclusion?

ANSWER: Because the contractor has been facilitized for high rate production, there is more than adequate capacity to obligate FY 1986 funding even though there have been delays already incurred in committing prior year funds. Additionally, the second source will start in FY 1985, and the Air Force will exercise its second source option to the FY 1986 contract, thereby increasing fill rates even further, as well as procuring fuzes at lower cost through competition. The problem which has caused the delay in exercising options for Air Force quantities is a safety issue in which the drogue sensor can sense high drag condition in error and arm the bomb prematurely during a high speed, low drag delivery. Because the problem has been identified and design changes have been incorporated and flight-tested, the Air Force remains confident that the funds appropriated can be committed to the contract.

BINARY CHEMICAL WEAPONS SAFETY

QUESTION: The minutes for the final increment of the Critical Design Review held in October 1984 indicate that the Air Force has expressed safety concerns about flight clearance for their aircraft, and the impulse cartridge design.

Please explain the above safety concerns.

ANSWER: The Air Force safety concerns relate to the design of the CCU-13/B impulse cartridge. The impulse cartridge contains an in-line primary explosive and igniter. This device is used to expand the ballonet diaphragm to inject powdered sulfur into liquid QL which, when mixed, will produce the chemical agent, VX. The Air Force Non-nuclear Munitions Safety Board has reviewed the design of this cartridge and stipulated that a modification to the cartridge was required or an additional safety test was needed to verify structural integrity of the Bigeye before Air Force initial operational testing could begin. The program office decided to conduct a test to verify weapon structural integrity. The test simulated an inadvertent function of the cartridge primer in a non-mix mode, i.e., the mechanical mixing mechanism was not engaged. For this test the weapon was filled with simulants which are used in operational testing. The test was successfully performed in government chamber facilities. The Air Force has begun operational flight tests of the Bigeye weapon.

CHANGES TO BIGEYE

QUESTION: What changes are needed in order for Bigeye to meet Air Force safety standards?

ANSWER: The Air Force safety concerns relate to the design of the CCU-13/B impulse cartridge. The impulse cartridge contains an in-line primary explosive and igniter. This device is used to expand the ballonet diaphragm to inject powdered sulfur into liquid QL which, when mixed, will produce the chemical agent, VX. The Air Force Non-nuclear Munitions Safety Board has reviewed the design of this cartridge and stipulated that one of the following is needed: (1) an out-of-line initiating system for the mixing system; or (2) substitution of an acceptable in-line explosive material for the primary explosive presently used; or (3) a demonstration that any reaction is contained in the weapon. An additional safety test of the weapon containing live agent will be performed in the government chamber facilities. This test will simulate an inadvertent function of the cartridge primer in a non-mix mode, i.e., the mechanical mixing mechanism will not be engaged. The test will demonstrate the weapon's ability to contain the chemical reaction and satisfy the safety concerns. A similar test with successful results was performed using chemical simulants prior to starting initial operational testing.

USE OF THE BIGEYE WEAPON

QUESTION: If these changes are not made to Bigeye, will the Air Force be able to use the weapon? Please explain your answer.

ANSWER: The Air Force safety concerns relate to the design of the CCU-13/B impulse cartridge. The impulse cartridge contains an in-line primary explosive and igniter. This device is used to expand the ballonet diaphragm to inject powdered sulfur into liquid QL which, when mixed, will produce the chemical agent, VX. The Air Force Non-nuclear Munitions Safety Board has reviewed the design of this cartridge and stipulated that one of the following is needed: (1) an out-of-line initiating system for the mixing system; or (2) substitution of an acceptable in-line explosive material for the primary explosive presently used; or (3) a demonstration that any reaction is contained in the weapon. An additional safety test of the weapon containing live agent will be performed in government chamber facilities. This test will simulate an inadvertent function of the cartridge primer in a non-mix mode, i.e., the mechanical mixing mechanism will not be engaged. The test will demonstrate the weapon's ability to contain the chemical reaction and satisfy the safety concerns. A similar test with successful results was performed using chemical simulants prior to starting initial operational testing. With safety board approval, the Air Force will be able to procure and employ the Bigeye binary chemical weapon.

NORMAL WEAPON DELIVERY METHOD

QUESTION: Delivery methods, required by the draft TEMP of December 13, 1984, included level, loft, and dive delivery. What is the normal weapon delivery method used by the Air Force?

ANSWER: The delivery method for any weapon depends on numerous variables - the type of weapon, the type of aircraft, the type of target, the threat, etc. The delivery method used for a given situation will be determined by the aircrew that plans and flies the mission. As a result, there is no "normal" delivery method used by the Air Force for the Bigeye.

MINIMUM PURITY VX

QUESTION: Will this method(s) provide sufficient time to accurately deliver minimum purity VX over the target area? Please provide support for your answer.

ANSWER: Numerous tests of the full scale BIGEYE bomb have been conducted to insure that the reaction agent VX was produced within the design purity and time parameters you speak of. In each case, the VX reaction agent produced had an effective biological percutaneous toxic activity greater than that anticipated. The product is considered more than adequate to meet operational and technical effectiveness requirements.

DELIVERY MANEUVER

QUESTION: Will the delivery maneuver(s) required for employment of the BIGEYE result in an unacceptable increase in the delivery aircraft vulnerability?

ANSWER: No, to employ any air-to-ground munition, the Air Force uses the level, loft, or dive maneuver. Developmental flight testing has demonstrated that the BIGEYE can be safely released using these delivery techniques, and therefore aircraft vunerability during BIGEYE delivery would be no more or no less than that of other unguided air delivered munitions.

BIGEYE'S RELIABILITY

QUESTION: The Bigeye draft TEMP of December 13, 1984, states that the use of the FMU-140 proximity fuze and the addition of a ram air turbine as a power source for ignition of the gas generator impose increased risk level in reliability.

What is Bigeye's reliability with and without the FMU-140 proximity fuze and ram air turbine?

ANSWER: The overall reliability goal for the Bigeye is 0.90 at the 80% confidence level. When the operational employment concept was changed to allow mixing after the weapon is released from the aircraft (referred to as off-station mixing), the FMU-140 fuze and FZU-37 A/B initiator fuze were added to the weapon design. The overall weapon reliability goal did not change with the new design.

DELIVERY OF BIGEYE

QUESTION: Which Air Force aircraft will deliver the Bigeye?

ANSWER: For the Air Force, the F-4, F-16 and F-111 will be certified to carry the Bigeye binary chemical weapon for operational testing. The F-4 and F-16 will be used in phase 1 of initial operational testing. The F-16 and F-111 will be used in phase 2 of initial operational testing. The B-52 and F-15 will be certified by SEEK EAGLE.

BIGEYE DELIVERY SOFTWARE PACKAGES

QUESTION: Do you have complete Bigeye delivery software packages for these aircraft?

If your answer is no, when will they be available?

ANSWER: Ballistics data for Bigeye is divided into two components. The first component pertains to the dispenser trajectory and the second component to the trajectory of the agent droplets. Dispenser trajectory is a function of its physical design. Droplet trajectory is a function of local environmental conditions and chemical agent characteristics. The dispenser trajectory data tapes for the F-4 and the F-16 are complete. For testing, droplet trajectory is computed manually using charts and graphs before take-off and produces an off-set aim point to determine the weapon release point. For F-111 testing during phase 2 of initial operational testing, a similar method will be used to determine weapon release points. Complete ballistics data tapes will be integrated into aircraft weapon system software after a production decision is made for Bigeye.

AVAILABILITY OF DATA

QUESTION: What data do you need to develop software packages? Is all needed data available? If not, when will it be available?

ANSWER: Ballistics data for Bigeye is divided into two components. The first component pertains to the dispenser trajectory and the second component to the trajectory of the agent droplets. Dispenser trajectory is a function of its physical design. Droplet trajectory is a function of local environmental conditions and chemical agent characteristics. This data is available now.

REASONS FOR PROCUREMENT OF BIGEYE

QUESTION: Why does the Air Force want to fund a binary chemical weapon which apparently cannot meet the minimum lethal VX purity requirement across the required time frame?

ANSWER: The purity levels stipulated were original design goals for the agent. At the high temperature extremes, the impurities produced during the formation of VX actually enhance the bio-toxicity of the overall reaction product. Thus, the effectiveness of the weapon is retained in the high temperature region. The Bigeye weapon provides the Air Force with a deterrent and retaliatory capability presently lacking in the chemical weapons area. In addition, through the binary concept, it offers advantages in handling and storage over the existing unitary chemical stockpile.

ASAM (ADVANCED SURFACE/AIR MISSILE)

QUESTION: The Navy is requesting $41.5 million for the ASAM program. This program funds 3 projects:

---ASAM concept formulation	$16.1 million
---AAAM concept formulation	$6.5 million
---SAM Risk Closure	$18.9 million

What is the requirement for $22.6 million for projects in "concept formulation?"

ANSWER: The funds requested for AAAM and ASAM cover three types of activities. They include a) completion of the Concept Formulation work begun FY-85, including multiple Concept Formulation contracts with industry and Navy completion of the Development Options Paper, b) conduct of several engineering experiments which are needed to establish the limits of some present targeting and battle management systems to support the outer air battle weapons, and, c) to initiate the Concept Validation phase of the developments following a DSARC in mid 1986.

QUESTION: What is the extent of industry involvement in the projects?

ANSWER: Within the three projects, there is substantial industrial participation. Of the $41.5 million requested, $31.2 million is budgeted to industry for Concept Formulation contracts, initiation of Concept Validation and for development of missile and shipboard hardware under the SAM Risk Closure Project. Industry is conducting separate concept formulation contracts to examine the best set of missile developments possible to meet the Navy's Outer Air Battle requirements expressed in the Tentative Operational Requirements, and the degree to which cost can be reduced through use of commonality. Industry will also be the principal equipment developer of the resultant Outer Air Battle missile developments and under the SAM Risk Closure effort.

QUESTION: At what point will decision be made to transition to technology definition?

ANSWER: The next major decision point for P.E. 63318 is following the Concept Formulation phase at the DSARC in mid 1986. At that point, the Navy will present its program for subsequent missile developments and/or upgrades to meet its Outer Air Battle and high altitude missile requirements.

QUESTION: The purpose of the program is to consolidate the Navy's R&D efforts on an air-to-air and surface-to-air missile through the concept definition phase, in an effort to obtain maximum commonality in missile components and technology. Is it your intent to try and conceive a common ASAM missile of approximately the same size?

ANSWER: A completely commmon missile with an add-on booster for surface launch is one candidate to be specifically evaluated by the contractors. Eventual selection of options will be based on comparisons of total cost, performance and other factors.

QUESTION: The surface-to-air missile risk closure project ($18.9 million) is a nominal 2-year program to improve existing Navy surface-to-air missile systems. Will it be possible to obtain range and guidance parameters needed for the Navy's Outer Air Battle from product-improvements to existing surface-to-air missiles?

ANSWER: It is not necessarily intended that the Navy's Outer Air Battle needs will be met through a product upgrade, although that option is under consideration. The efforts under the SAM Risk Closure are primarily intended toward preserving the earliest possible IOC for the improvements of the high altitude capability of STANDARD MISSILE and for the subsequent application of those same developments to a possible new ASAM. [Deleted]. In any case, the effort has application to any of the possible options the Navy will select to meet its high altitude and Outer Air Battle requirements.

SM-2(N)

The Navy is again requesting funds ($9.8 million) for R&D on integration of a nuclear warhead into the Standard missile

(SM-2). Last year, OSD offered up the SM-2 (N) program in the May budget revisions, and Congress did not fund the program.

QUESTION: What is the requirement for the SM-2(N)? Why, if it was such an urgent requirement, was funding deleted for it last year?

ANSWER: The requirement for a nuclear variant of the Standard Missile-2 (SM-2(N)) continues to be as a deterrent [deleted]. The SM-2(N) provides the [deleted]. The SM-2(N) complements the conventional SM-2 capability and cannot be contrasted against that conventional capability. The SM-2(N), unlike its conventional counterpart [deleted].

The Navy decision to eliminate funding for a nuclear variant of the Standard Missile 2 (SM-2(N)) was made reluctantly and only after being faced with the requirement to make deep cuts in FY 1985. The Navy's intent was to study the potential options for a nuclear advanced surface to air missile (ASAM) in lieu of proceeding with SM-2(N) development.

Since that decision, the Navy has concluded that the SM-2(N) mission could not be accomplished by a nuclear ASAM. The Navy has also completed a detailed Concept of Employment Study for SM-2(N). We have concluded that SM-2(N) is an essential part of the Navy's air defense capability for the 1990's and should be pursued. The Navy has restructured this program to provide the nuclear SM-2 capability for our AEGIS Vertical Launch System ships.

QUESTION: What is the Navy's outyear commitment to the program?

ANSWER: The Navy has concluded that SM-2(N) is an essential part of the Navy's air defense capability for the 1990s. SM-2(N) greatly improves the survivability of a maritime force [deleted].

The Navy is committed to developing SM-2(N) for AEGIS/VLS ships. The FY 1986 Research & Development Descriptive Summary shows the FY 1987 estimate of $23,886,000 and Additional to Completion of $125,989,000.

We note that the program description shows that it will now cost $229.9 million to finish R&D on the program, compared to $177.3 million quoted last year.

QUESTION: Is the SM-2(N) really affordable, given the Navy's large R&D funding priorities? If the answer to that question is yes, then why don't you make an even greater commitment to it, accelerate the program and prevent slips that occur year after year?

ANSWER: The SM-2(N) program is affordable. The protection for the battle group and the deterrent value provided by SM-2(N) are well worth the development cost.

Acceleration of the program is not feasible because of joint Navy-Department of Energy testing and production requirements, combat system integration requirements with the AN/UYK-43/44 computer, and AEGIS/VLS ship schedules.

QUESTION: Will putting the SM-2(N) on Navy ships have the same adverse public relations impact that putting the TLAM-N into the inventory has had?

ANSWER: The nuclear version of the Terrier missile (BTN) has been deployed on Navy surface ships since the early 1960's without adverse public relations. The SM-2(N), like the Terrier BTN, is a defensive weapon which provides significant deterrence. The Navy expects no adverse public relations from replacement of obsolete Terrier BTN by SM-2(N).

ASW STANDOFF WEAPON

The Navy is requesting $75.3 million for continued development of the ASW Standoff Weapon, a submarine-launched rocket capable of delivering lightweight torpedoes or nuclear depth bombs. This program has already been reduced by $59.3 million from the projection made by the Navy for the program last year, and the Senate Armed Services Committee recently proposed another $25 million reduction to the FY86 program.

QUESTION: Why was the Navy willing to accept a one year slip in IOC, particularly when that drove up total program R&D costs by more than 5 percent?

ANSWER: Navy reluctantly accepted a one year IOC slip and increased total program R&D costs because overall Navy fiscal constraints for FY86 necessitated rescheduling of ASWSOW program.

QUESTION: Were the reasons for the program restructuring primarily financial, or were there technical reasons?

ANSWER: The program was rescheduled (not restructured) for financial reasons only. The program has been technically successful in every effort to date.

QUESTION: The program description indicates that an FSD contract award is to be made in June 1986. Can that award be made without fully funding the FY 86 budget request?

ANSWER: Depending upon the magnitude of the budget reduction, it is anticipated that the FSD contract award can still be made. However, without full funding the current FSD schedule cannot be achieved. If the FY 86 budget request is not fully funded, development engineers now working on ASWSOW will be reassigned to other programs. These engineers will be replaced when adequate funds are made available. The FSD program will again need to be rescheduled in order to account for time lost because of inadequate funding and training of replacement personnel.

QUESTION: Are you now ready to produce the ASW Standoff Weapon Capsule?

ANSWER: No. FSD of the capsule has not yet been funded. Capsule development program is on schedule and has been technically successful to date.

QUESTION: When will you conduct the final static firings of the rocket motor?

ANSWER: Four static firings remain in the D&V Phase Program. One will be fired in July 1985; another in October 1985; and, the remaining two planned for February 1986. Up to 30 additional qualification static firings will take place during FSD.

QUESTION: Have all test objectives been successfully demonstrated during the floating launch effort?

ANSWER: All objectives of the floating launch test program, conducted in March 1984, were met. Major test objectives included:

a. Validate that the missile can fly out of the capsule during a simulated broach condition.

b. Obtain missile and capsule dynamics data during flyout.

c. Obtain environmental data during missile flyout.

d. Obtain data on operation of the sabots and capsule blowout port. Data collected were used to confirm missile/capsule design criteria during flyout and to confirm and update analytical progams.

QUESTION: How are the following 1985 tests coming along: fin flutter, nuclear depth bomb separation, shock tests, deep launch tests?

ANSWER: a. Fin flutter testing was initiated in December 1984. Fourteen runs were made and several flutter points were obtained. However, problems were encountered with the Vought High Speed Wind Tunnel device used to protect the fin model from wind tunnel startup transient shock loads and testing was terminated. A device to provide positive protection for fin models from wind tunnel startup shock loads is being developed. The entire supersonic test matrix will be rerun in FY86 using this new protective device.

b. NDB separation wind tunnel test was successfully completed in January 1985. A total of 122 hours of wind tunnel time was used to collect payload/booster separation data and tail control effectiveness data. These data will be used in separation simulation studies to validate that: (1) NDB payload is stable during separation, (2) booster is controllable, (3) booster drag is sufficient to assume separation and (4) NDB payload and booster are adequately separated at parachute deployment so that the booster does not strike the parachute. NDB separation sled tests are planned for FY87. Navy has supported a series of DOE water entry tests which completed in May 1985. These tests provided data to DOE on in-air and in-water stability of the NDB, shock characteristics associated with water entry and effects of water impact on NDB hardware.

c. Preliminary Stowage Rack Shock Test (PSRST) Series was successfully completed at the West Coast Shock Facility in May 1985. All test objectives were met. Primary objective of the test was to determine the response of the ASW Weapon to the MIL-S-901C high impact shock environment in submarine upper outboard and center table stowage positions. No capsule or missile damage was observed during the 9-shot test series. Data fully supports weapon design adequacy.

d. Deep Launch Test has been combined with the Submarine Strikedown/Clearance tests and is planned for fall 1985.

QUESTION: Why is there a break in the TECH/OPEVAL between the nuclear depth bomb tests and the MK 50 tests? What are you doing to try and close that break?

ANSWER: There is no break in the engineering development program. Payload configurations are being developed in tandem to maximize efficient use of the engineering team. Development effort logically flows from the NDB to the MK 50 torpedo. TECH/OPEVAL of the MK 50 configuration therefore follows the NDB TECH/OPEVAL.

QUESTION: The program description also indicates that another $292 million is required to complete development of the ASW Standoff Weapon. Additional program restructuring or congressional cuts could slip the program even further and drive up costs higher. Provide to the committee a comparison of the projected ASW Standoff Weapon inventory through the year 1995 with that of the current schedule for phasing out SUBROC.

ANSWER:

FY	SUBROC INVENTORY	ASWSOW INVENTORY
85	(Deleted)	(Deleted)
86	(Deleted)	(Deleted)
87	(Deleted)	(Deleted)
88	(Deleted)	(Deleted)
89	(Deleted)	(Deleted)
90	(Deleted)	(Deleted)
91	(Deleted)	(Deleted)
92	(Deleted)	(Deleted)
93	(Deleted)	(Deleted)
94	(Deleted)	(Deleted)
95	(Deleted)	(Deleted)

QUESTION: Is it feasible to resurrect a SUBROC life extension program at this point in time? How do the costs of keeping an improved SUBROC in the inventory compare with the additional R&D on the ASW Standoff Weapon?

ANSWER: A SUBROC life extension program cannot provide the Navy with a viable ASW Standoff Weapon because:

a. SUBROC inventory is too low to provide enough weapons to meet the threat. Additional SUBROCS cannot be manufactured.

b. SUBROC is an aging weapon. The last weapons were manufactured in 1972. Even with the current extended life plan, because of aging components SUBROC's reliability is decreasing and the need for maintenance is increasing.

c. The submarine combat systems which are TOMAHAWK capable are not SUBROC compatible. The number of SUBROC capable submarines will be zero when the last of the SSN 594 class is retired.

d. SUBROC's maximum launch depth is so shallow that submarines cannot fire the weapon from depths which are optimal for targeting modern Soviet submarines.

e. SUBROC cannot carry a conventional payload.

Navy currently has a SUBROC extended life plan to support standoff weapon capability on SSN 594 class submarines through 1996. The current effort is the optimum program for SUBROC in consideration of the above factors.

QUESTION: What alternative would the Navy have if the ASW Standoff Weapon is terminated.

ANSWER: There are two alternatives the Navy will have:

a. Alternative 1: Accept unfavorable exchange ratios in engagements with Soviet submarines, which is not acceptable.

b. Alternative 2: Start up another standoff weapon program with a three year later IOC than the present program and with higher costs.

QUESTION: Provide the committee a funding profile, starting in FY 86, to accommodate a SUBROC life extension.

ANSWER: CNO has directed that the SUBROC weapon system be extended through 1996. Life extension beyond 1996 is not feasible because no SUBROC capable submarines will remain in the fleet. A total of [deleted] missiles are currently available in the stockpile to support this program. The stockpile will decrease each year due to fleet firings and warhead retirements.

SUBROC capability will be retained on SSN 637 and SSN 688 class submarines until commencement of the ships' TOMAHAWK conversion overhaul. Current overhaul schedules show that after FY 1991 only SSN 594 class submarines will have SUBROC capability.

FY	85	86	87	88	89	90	91	92	93	94	95	96
SUBROC SSN's	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)

The required funding to maintain the few remaining SUBROCs in the fleet through FY 196 is:

	FY	86	87	88	89	90	91	92	93	94	95	96
WPN	($000)	4038	1376	2849	2496	758	758	600	500	250		
OM&N	($000)	10696	11249	11397	10870	10420	9772	9000	7500	6500	5000	3000

SIDEWINDER AIM-9M

QUESTION: Does the increased capability of the AIM-9M PIP justify the 25-30 percent cost increase (flyaway cost) over the AIM-9M?

ANSWER: The cost of acquiring an increased capability can be justified on the basis of the known threat and the lack of capability of the existing weapon to counter that threat. The threat exists in Soviet air-to-air missiles with head-on capabilities and aircraft which have [deleted] dispensers.

The Soviets, French and Israelis have developed air-to-air missiles with a head-on capability comparable to the AIM-9L/M Sidewinder. Therefore, the most important performance capability improvement of AIM-9M PIP is the increase in head-on acquisition range. ACE/AIMEVAL, conducted in the early 1970's, clearly demonstrated that in a dog fight with comparable weapons systems the fighter that shot first usually won the fight, [deleted]. The AIM-9M PIP will [deleted] of the AIM-9M thereby giving U.S. pilots the first shot edge before the adversary is within acquisition range. This is especially critical when the adversary aircraft outnumber the U.S. aircraft.

Secondly, in the last few years the Soviets have been equipping their aircraft with flare countermeasures. [Deleted] [deleted]. Photographs of Soviet aircraft and helicopters in Afghanistan using flares have been published by Aviation Week. Published intelligence reports [deleted] used in Navy aircraft. It is clear that the Soviets understand that using flares at increasing rates to defeat IR missiles is required. Just as the AIM-9M with [deleted] was an improvement of the AIM-9L, which has [deleted] [deleted] the AIM-9M PIP will [deleted] [deleted] of the AIM-9M.

Based on the above, an increase of 25-30 percent in the unit cost for the Guidance Control Section (GCS) (not the entire missile) will certainly be offset by the savings in U.S. aircraft, the lives of aircrew and the avoidance of damage to targets on the ground by Soviet aircraft.

QUESTION: Won't ASRAAM provide even greater capability and CCM than an AIM-9M PIP missile? Why not wait for ASRAAM?

ANSWER: The ASRAAM missile is being developed by West Germany, United Kingdom and Norway to meet the Tri-National Operation Requirements (TOR) originally agreed to by the U.S., West Germany and United Kingdom. [Deleted] [deleted]. The AIM-9M PIP will have a [deleted] launch range of 3NM whereas the Europeans claim [deleted] [deleted]. However this launch range is achieved by lock-after-launch. The lock-before-launch range is approximately The CCM capability of ASRAAM has not been briefed to the U.S. We do not think that the [deleted] [deleted]. We have demonstrated the acquisition range capability of the AIM-9M PIP, whereas the ASRAAM capability is estimated from analysis and computer simulations. The present [deleted] [deleted]. The Europeans currently plan to start production in (d) with the first deliveries to European forces in early (d). If this schedule is maintained, the earliest deliveries of test hardware for U.S. aircraft integration and verification of test results would be in mid-1994. Assuming satisfactory test results and approval to start a U.S. production line, deliveries to U.S. inventories could commence in (d). If AIM-9M PIP is not available by (d), U.S. forces would not be able to counter [deleted] [deleted]. By 1998 the AIM-9M, procured in 1981 and delivered in 1983, would be 15 years old. It is essential that the U.S Have the AIM-9M PIP in the inventory until ASRAAM is available, not only to have a capability to meet the threat, but also: (1) to maintain a production base from which to compete production of ASRAAM when it becomes available; and (2) to maintain a technical base to further develop a missle to meet the current and future Soviet threats in case the ASRAAM does not meet the requirements or is cancelled.

QUESTION: The AIM-9M PIP program seems to have evolved from China Lake in an effort to keep Sidewinder production going into the mid-1990's. When was the requirement for the AIM-9M PIP established? Or are you basically taking advantage of new technology just for the sake of it?

ANSWER: As in previous Sidewinder programs the Navy has made improvements in the Sidewinder to meet the threat. The policy of the Navy is to provide aircrews with weapons that work and have a high probability of destroying the threat. Naval Weapons Center is chartered to perform the necessary research in development of weapons which allows the U.S. to obtain and maintain technological superiority to all threats. During the review for approval for full prodution of AIM-9M, April 1981, DDR&E expressed interest in an improvement to AIM-9M because of Sidewinder Foreign Military Sales and the need for U.S. aircrews to maintain an effective superiority to all known threats. In late FY 1982 an evaluation of competing seeker technologies from government and industry was completed. The CCD seeker technology developed by China Lake outperformed all alternatives by at least 40 percent and was the only technology meeting the established requirement of doubling the seeker acquisition range.

The AIM-9M PIP was approved in FY 1984. In FY 1985, the Senate and House Armed Services Committees, in conference, authorized $3.9M to start the AIM-9M PIP. However, the Senate and House Appropriation Bill deleted the $3.9M and requested explanation of AIM-9M PIP schedule relative to ASRAAM and the Navy's plan for outyear production.

QUESTION: Your AIM-9M PIP procurement strategy shows that 2700 Sidewinders will be procured between FY 1990 and FY 1994 with the full PIP package; another 7200 missiles will be retrofitted with a new guidance and control system. Now, most of the cost for the PIP is in the guidance and control section. Do you consider your procurement strategy to be cost effective? Why don't you buy out the Sidewinder Program in two or three years, rather than let procurement stretch out to five years (FY 1994)?

ANSWER: We have structured the PIP program to be as cost effective as possible. The reason for continuing procurement of all the Sidewinder components between FY 1990 and FY 1994 is to replace missiles expended for weapon system evaluation and to add missiles to the inventory for the anticipated increase in Sidewinder capable platforms, i.e. helicopters. We are anticipating that there will be additional requirements for AIM-9M PIP in the FY 1990-1994 timeframe. Based on previous experience, we expect the U.S. Air Force to have a substantial requirement for the AIM-9M PIP. We will continuously evaluate the most cost effective way of buying the AIM-9M PIP while yet maintaining our mobilization requirement.

QUESTION: What is the requirement for continued Sidewinder production between FY 1990 and FY 1994? What are the plans of the U.S. Air Force?

ANSWER: The procurements planned to meet Navy requirements are:

	FY-90	FY-91	FY-92	FY-93	FY-94	TOTAL
AUR QTY	600	600	600	600	300	2700
GCS ONLY QTY	-	1200	2000	2000	2000	7200

The U.S. Air Force is currently evaluating production requirements for AIM-9M PIP. The Air Force has not made a firm commitment at this time, but is retaining the option to participate in the production program.

QUESTION: Won't the production costs of the AIM-9M PIP skyrocket, due to the decrease in Navy/Air Force production from 1,500-2,000 missiles to just 600 per year?

ANSWER: At this time, only the Navy is planning to buy AIM-9Ms in FY 1988 and FY 1989 with a quantity of 1168 and 600 all-up-rounds, respectively. AIM-9M PIP production commences in FY 1990 with a start-up procurement of 600 all-up-rounds. The following year, FY 1991, 600 all-up-rounds will be procured along with 1200 GCSs for an inventory upgrade program. Therefore, 1800 GCSs will be procured with 600 aft components. The GCS makes up between 60-65 percent of the hardware cost thereby minimizing the increase in production costs. The FY 1992 planned procurement is for 2600 GCSs, FY 1993 for 2600 and FY 1994 for 2300. It should be noted that this current plan is for the Navy only. Historically, the Air Force comes on board to procure Sidewinders late. Originally the Air Force's last AIM-9M procurement was FY 1984. Currently, the Air Force is planning to buy AIM-9Ms through FY 1987. Additionally, the Air Force is considering 9M procurement through FY 1989 and 9M PIP procurement from FY 1990-1994. Lastly, Foreign Military Sales (FMS) needs to be considered. The number of missiles sold to FMS customers differs greatly from year to year. Should sales be made to FMS customers through replacement-in-kind (RIK) procedures during the 9M PIP timeframe the annual procurement buy will increase.

Therefore, production costs of the AIM-9M PIP will not skyrocket over the AIM-9M program but reflect a downward learning curve as experienced on the AIM-9L and AIM-9M production programs.

QUESTION: Won't you be keeping the Sidewinder down far below current economical rates of production?

ANSWER: The minimum rate of production to maintain both GCS sources is 2000 missiles per year. A procurement of less than 2000 missiles per year makes it economically unfeasible to maintain two producers. The first buy of 600 9M PIPs will be built by one of the current GCS contractors. Of the second buy of 1800 9M PIPs, the second source GCS contractor will build 600 units and the first source will build 1200. The third and subsequent year buys will be competitive having procurements of over 2000 GCSs. The GCS is the component of most concern as it makes up between 60-65 percent of the hardware cost. During 9M PIP production the Navy plans to procure 600 sets of aft components each year. Based on past history, it is highly probable that the Air Force and FMS Sales, through RIK, will materialize thus increasing the procurement of the number of GCSs and aft components. Should the Navy be the only procurer of 9M PIPs the Navy would propose to buy the aft components over two years versus spreading the procurement over five years.

QUESTION: Have you considered just a retrofit, rather than continued Sidewinder procurement and a retrofit?

ANSWER: Yes, a retrofit has been considered, but additional procurements are necessary to replace assets used in weapon system evaluation and anticipated additional requirements because of increases in aircraft using Sidewinder.

QUESTION: What would be the impact on termination of the AIM-9M PIP effort on the production of the Sidewinder? Would you continue to want to buy the Sidewinder if it is only an AIM-9M?

ANSWER: If the AIM-9M PIP was not available for production, we would be at a disadvantage facing a numerically superior Soviet force with [deleted]. Whether we would continue AIM-9M production or shutdown depends on the status of the ASRAAM program and our assessment of the Soviet threat at that point of time.

Advanced Lightweight Torpedo (ALWT)

The Navy is requesting $158.3 million for the Advanced Lightweight Torpedo. We understand that all R&D is being conducted within the June 1983 "Should Cost" ceiling approved by the Secretary of the Navy.

QUESTION: Does the program have to be fully funded to avoid breaking the SECNAV's cost cap?

ANSWER: Yes. The "Should Cost" estimate was delivered to Congress in July of 1983. The estimate was based on a detailed schedule and Development and Validation (D&V) actual experiences in the design phase for the D&V Torpedo. If the program is forced to change the schedule, for whatever reason, the cost estimate contained in the "Should Cost" would no longer fully support the activity outlined in the new schedule. If the program is not fully funded, the SECNAV's cost cap would be broken and contract modifications would be required to move work out or slow progress. This would require the program to maintain the engineering "core team" for a longer period of time and would cause costs to increase.

QUESTION: In FY86, the Navy will commence fabrication of 200X series prototype torpedoes for technical test and evaluation. How many series 200 tests will be conducted for ALWT prior to release of WPN funds for production torpedoes in FY87?

ANSWER: Extensive "test, analyze and fix" testing, to achieve scheduled component and full system reliability growth, is being conducted on MK 50 electronics and mechanical systems in FY85. This effort leads to an in-water test program which includes 56 sea runs in FY86 and approximately the same level of effort in FY87. Upon completion of TECHEVAL in mid FY87, which consists of approximately 45 sea runs, material will be released to fabrication of the first low rate initial production lot of torpedoes. Long lead purchases of proven subsystems precede this release to fabrication.

ALWT (Advanced Lightweight Torpedo)

QUESTION: When do you begin in-water verification tests for 200B series torpedoes? How many will be tested prior to the scheduled release of WPN funding in FY 1987?

ANSWER: In-water proofing tests of 200B series torpedoes begin in March 1987. The tests will continue at a rate of approximately four tests a month until completed. (See question: "How many series 200 tests will be conducted for ALWT prior to release of WPN funds for production torpedoes in FY 1987?)

QUESTION: Does the TECH/OPEVAL run concurrently with initial production of WPN FY 1987 torpedoes? Why?

ANSWER: Yes. TECH/OPEVAL weapons are to be built on a production line in order to provide the "real" fleet weapon to the test program. Once this production line is established with the start of the 200B evaluation lot torpedoes it is necessary to maintain it at a low rate, while awaiting the completion of OPEVAL and the Milestone IIIB decision to ensure engineering fidelity and quality are maintained.

QUESTION: Will TECH/OPEVAL be completed prior to approval for full production in October 1988?

ANSWER: Yes.

MINE DEVELOPMENT

QUESTION: How will the Navy's mine inventories change between the time when CAPTOR procurement ends (FY 1985) and you start production of a next generation mine? Or can you even estimate when a next generation mine will enter production?

ANSWER: The projected mine inventories for 1985, 1990 and 1995 are provided in the attached table. New Generation Mine introduction is projected for the [deleted].

U.S. MINE POSTURE

MINE TYPE	DELIVERY PLATFORM	INVENTORY (END, FY)		
		1985	1990	1995
MK 52, 55	(Deleted)	(Deleted)	(Deleted)	(Deleted)
DESTRUCTORS	(Deleted)	(Deleted)	(Deleted)	(Deleted)
QUICKSTRIKE MK 65 (EXP LOAD)	(Deleted)	(Deleted)	(Deleted)	(Deleted)
MK 65 (EMPTY CASE)	(Deleted)	(Deleted)	('eleted)	(Deleted)
QUICKSTRIKE TDD'S	(Deleted)	(Deleted)	(Deleted)	(Deleted)
MK 56	(Deleted)	(Deleted)	(Deleted)	(Deleted)
CAPTOR (READY FOR MK 60 ISSUE	(Deleted)	(Deleted)	(Deleted)	(Deleted)
CAPTOR (DELIVERED MK 60 BY CONTRACTOR)	(Deleted)	(Deleted)	(Deleted)	(Deleted)
MK 57	(Deleted)	(Deleted)	(Deleted)	(Deleted)
SLMM MK 67 (EXP LOAD)	(Deleted)	(Deleted)	(Deleted)	(Deleted)
CAPTOR MK 6)	(Deleted)	(Deleted)	(Deleted)	(Deleted)
TOTAL	(Deleted)	(Deleted)	(Deleted)	(Deleted)

MINE DEVELOPMENT

QUESTION: Will termination of CAPTOR put the Navy below its mine inventory objective for the program?

ANSWER: CAPTOR procurement was terminated, as a matter of affordability, with the FY 85 buy which will lead to an inventory of (d) mines. The original inventory objective (I.O.) for CAPTOR was (d) mines. This I.O. was based in part on mining the Greenland-Iceland-Norway (GIN) gap which alone requires over (d). CAPTOR mines. However, the [deleted] of the GIN gap [deleted] [deleted]. An inventory of less than (d) CAPTOR mines is therefore considered acceptable.

QUESTION: We understand that the Navy is still evaluating just what kind of mine it wants--whether it be bottom v. moored, shallow v. deep, expensive v. inexpensive. When will you be able to decide on what you want?

ANSWER: The initial phase of the Navy's New Generation Mine Program is due for completion in mid-summer, 1985. This phase will identify a short list (5 to 7) of candidate new mine concepts resulting from a highly structured, thorough analysis incorporating the Navy's basic requirements for mining missions and the technical realities of mine design. The Navy will then evaluate the several candidate mine concepts through the Development Options Paper (DOP) process to determine which mine (or mines) offers the most payoff. The final new generation mine(s) configuration will be documented in an Operational Requirement (OR) to be promulgated in the early FY 86 timeframe. The OR will then serve as the basis for competitive industrial development and procurement of new generation mines.

QUESTION: Which is more important to the Navy, more CAPTORs or more Mark 46 Mod 5 torpedoes?

ANSWER: The FY 86 presidential budget requests procurement of additional MK 46 torpedoes and does not, as a matter of affordability, request additional CAPTORs. The funded CAPTOR Inventory combined with other ASW programs in the budget request (including MK 46 Mod 5 torpedoes) will give us a balanced ASW force mix.

QUESTION: What progress has been made to date?

ANSWER: The Navy's mine development program is making good progress. First, three new mines are in production, namely CAPTOR (the free world's only deep water ASW mine and probably the most sophisticated mine in the world (friend or foe)), QUICKSTRIKE (a family of new bottom mines that offers highly sophisticated target detection capability and rapid preparation and deployment time), and the Submarine Launched Mobile Mine or SLMM [deleted] [deleted]. Of these three mines, only QUICKSTRIKE requires further development beyond routine improvements. In particular, one of the three new QUICKSTRIKE target detecting devices (TDDs) is still being designed. The other two TDDs are in production.

In addition to CAPTOR, QUICKSTRIKE, and SLMM, the Navy is pursuing an aggressive mine improvements program which develops new mine subsystems such as high speed/low altitude parachute flight gear, new mine batteries, new target detection algorithms, advanced minefield theory, and new safing and arming devices.

Finally, the Navy recognizes that now is the time to be initiating development of mines of the future which can fully counter the projected 21st century threat. The New Generation Mine Program (NGM) has been underway since FY 84 and is nearing the point where specific new generation mine concept(s) will be offered to industry for development.

QUESTION: Would you describe your general mine warfare program as fully funded? Where are there shortfalls?

ANSWER: The President's budget represents a balanced approach to meeting those requirements in all areas of naval warfare needed to counter the potential Soviet threat. Mine warfare funding requested in FY 1986 will, if provided, adequately support our present need.

QUESTION: You have been testing CAPTOR [deleted]. What have been the results and what is in the FY 1986 Navy budget to support continued evaluation of CAPTOR's [deleted] capability?

ANSWER: The CAPTOR [deleted] has been tested (d) as a part of [deleted] which was conducted during October/November 1984. Test results indicated that the CAPTOR mine can detect and localize targets at least as well [deleted].

The CAPTOR test discussed above did not investigate operation of the CAPTOR payload, the MK 46 Mod 4 torpedo. Tests of this torpedo [deleted] are planned for FY 86 and an all-up systems test of the CAPTOR mine, including its MK 46 torpedo payload, is planned for early FY 88.

The FY 86 cost for continuation of [deleted] is programmed at $7.5M.

TOMAHAWK RDT&E BUDGET REQUEST

QUESTION: The Navy is requesting $68.8 million in FY-86 for continued RDT&E on the TOMAHAWK Cruise Missile. This year's request increased by $20.9 million to support missile improvement upgrades and $6 million for nuclear safety.

These costs were not projected last year. What is the reason for the change in funding requirements?

ANSWER: The Program Element Descriptive Summaries (PEDS) for the TOMAHAWK Program (64367N) describe a net increase of $25.0M for the FY-86 request from the FY-85 President's Budget as follows:

Increases	
+$20.9M	Missile Improvement Upgrades
+$6.0M	Nuclear Surety
+$6.8M	Weapon Control System Block Upgrades
+$33.7M	Total

Decreases	
-$0.9M	Inflation Reduction
-$7.8M	Deletion of Survivability Program
-$8.7M	Total

Missile Improvement Upgrades: Funds requested in FY-86 for missile development work are centered around three basic or core items: (1) Final development test and evaluation of the submunition dispenser variant of the missile (BGM-109D); (2) Sea Skim mode of attack, and (3) Nuclear Surety.

Development of the submunition dispenser missile allows a cruise missile ~~to~~ attack more than one target with a single missile. The modular design of the payload for the dispenser section accommodates more than one type of munition which increases planning flexibility. Targets susceptible to a submunition attack include revetted aircraft and air defense installations. Cost increase justification:

- Dispenser missiles hardware costs for flight and proof of concept development tests will cost more than expected.
- Increased emphasis on quality assurance and reliability requires support above those levels previously associated with weapon development.

The Improved Sea Skim Variant (ISSV) is an attack mode by which the TOMAHAWK Anti-Ship Missile's (TASM) hit probability (P_{hit}) goes up substantially and its probability of survival against advanced Soviet weapon systems is increased. This effort will correct a deficiency identified during TASM OPEVAL which was not completed until mid-1984.

Nuclear Surety: The Signal Certification Device (SCD) is under development to relieve continuing requirements to perform computer program Independent Software Nuclear Safety Analysis (ISNSA). The SCD will monitor the interface between the Fire/Weapon Control System and the BGM-109A. It will certify mission data, monitor signals exchanged, detect unsafe conditions, and shut down the missile when unsafe conditions are identified. Incorporation of the SCD in the TOMAHAWK Weapon System (TWS) is planned to lessen the requirement for continuing software nuclear safety and hardware nuclear safety analysis of the TWS and to reduce TOMAHAWK Weapon System's life cycle cost. This program was not defined until mid-1984, well after the FY-85 budget submittal.

QUESTION: Another $6.8 million was added for what is described as "TOMAHAWK Weapon Control System block upgrades?" Just what are these upgrades and why weren't they foreseen last year?

ANSWER: The $6.8M added for TOMAHAWK Weapon Control System block upgrades will be used to support correction of deficiencies that were revealed during the Ship System OPEVAL completed in June, 1984. These deficiencies were documented in the COMOPTEVFOR OPEVAL report published in August of 1984. The planning to correct these deficiencies was not completed until October 1984, after the submittal of the FY-85 Budget. The deficiency areas are as follows:

- TLAM Engagement Planning
- System Operability Test and On-Board Training
- Launch Sequence Continuation with Non-Critical Faults
- Continuous alerts for mission critical faults.

MK 48 ADCAP TECHEVAL

QUESTION: The Committee has been informed by the Navy that the TECHEVAL for the MK 48 ADCAP torpedo has slipped from a May start to a July start. What were the reasons for the slip? Were they primarily due to contractor test evaluation delays?

ANSWER: Slower than expected progress was made by Hughes Aircraft in developing and demonstrating in-water the maturity of the baseline, computer program tactics. Program delivery, originally scheduled for 1 March, did not occur until 15 May. An in-water software confidence testing phase is now in progress to provide the data base necessary to support a decision to start TECHEVAL by 1 July. Delays were also encountered in the delivery of Full Scale Engineering Development (FSED) torpedoes due primarily to problems in the circuit card manufacturing and assembly process at Hughes. By 1 April, two of nine planned units had been delivered. These difficulties are now behind the program. A substantial pipeline of circuit cards for integration and assembly of the remaining TECHEVAL torpedoes has been established. Six torpedoes have been delivered to date. New units are being delivered at a minimum rate of one per week.

QUESTION: Completion of the MK 48 ADCAP TECHEVAL is tied to release of FY 1986 production funds for procurement of the torpedo. Is the entire TECHEVAL to be completed prior to the release of FY 1986 production funds?

ANSWER: TECHEVAL will be completed prior to release of the FY 1986 production funds.

QUESTION: Do you intend on restructuring the MK 48 ADCAP TECHEVAL?

ANSWER: The ADCAP baseline testing schedule approved in the TEMP includes the following key milestones:

1 Apr 1985	Commence TECHEVAL testing
15 Dec 1985	Complete TECHEVAL testing

Testing was scheduled to begin at a relatively low rate in April 1985 based on the expected delivery of a minimum of nine FSED torpedoes and the availability of the final, validated TECHEVAL computer program tactical logic baseline. Delays were encountered in both of these areas which have delayed the start of TECHEVAL. Based on the hardware and computer program progress demonstrated to date, ADCAP TECHEVAL is now planned to start on 1 July, with 12-15 torpedoes. Because of the low testing rate initially scheduled in the early months of TECHEVAL, sufficient time is available to replan the tests to complete by the end date intended. TECHEVAL testing is therefore still projected to be completed in December 1985.

QUESTION: Will this restructuring make the program more or less concurrent?

ANSWER: With TECHEVAL still scheduled for completion in December 1985, program concurrency is not affected.

QUESTION: Will this slip in the MK 48 ADCAP

TECHEVAL mean that you will require additional RDT&E funding above the $610 million programmed for the development of the MK 48 ADCAP?

ANSWER: Additional RDT&E funds will not be required to complete development of the baseline ADCAP torpedo.

MK 48 ADCAP PRODUCTION STATUS

QUESTION: Was the scheduled April 1985 Limited Rate Production DNSARC held? If so, what were the results? If not, why was it delayed and when is it now scheduled?

ANSWER: The Limited Rate Production CNO/SECNAV Review originally planned for April 1985 is now scheduled for July 1985. Full Scale Engineering Development (FSED) torpedo in-water performance data gathered during Contractor Test and Evaluation firings will be presented for this CNO/SECNAV review. Hughes Aircraft was slower than expected in developing and demonstrating in-water maturity of the baseline computer program tactics. The final tactics baseline, originally scheduled to be available by 1 March, was delivered on 15 May. Delays were also encountered in the delivery of FSED torpedoes resulting primarily from problems in the circuit card manufacturing and assembly process at Hughes. Even though these difficulties are now behind the program, these delayed deliveries have prevented conducting the testing required to support the CNO/SECNAV review before July 1985.

QUESTION: Over $400 million is requested for 123 MK-48 ADCAP torpedoes. The unit price of this torpedo is over $3.5 million. How many MK-48's do you propose to buy over the life of the program?

ANSWER: Total procurement planned for MK 48 ADCAP is 3339 units. It should be noted that the unit price indicated above includes a large amount of nonrecurring start up costs (tooling, test equipment, data, etc.). These costs are normally associated with initial production and build up to rate production for weapon systems. Per unit swim-away cost over the total buy, as presented to the OSD Cost Analysis and Improvement Group on 11 April 1985 is $1.4 million in then year dollars.

QUESTION: It has been indicated that the Navy plans to seek a second source for this torpedo in 1989. Why are you waiting until then? Why doesn't the Navy seek a second source sooner?

ANSWER: Source selection for the follower is currently underway and award of the familiarization contract is scheduled for July 1985. A three phased follower development process (Familiarization-FY 85, Qualification-FY 86, Pilot Production-FY 87) is planned. The first full competition buy is scheduled for FY 1988.

LASER MAVERICK AGM-65E

The Laser Maverick is an air-to-surface short range semi-active laser guided missile with a penetrating blast/fragmentation warhead. It is a variant of the Air Force's TV guided missile modified to incorporate a semiactive laser seeker, a larger (300 lb. vs 125 lb.) general purpose blast/penetration warhead with a selectable delay time fuze, and a reduced smoke rocket motor. The missile is planned for both Navy and Marine Corps use and will be used with a single rail launcher.

The fiscal year 1986 request is for 1,500 missiles at $194.3 million.

QUESTION: According to the Navy's Maverick program office, operational testing of the Laser Maverick has slipped nearly 5 months from March to August 1985. What was the cause of such a significant slippage in testing the Laser Maverick?

ANSWER: The slip in operational testing to August 1985 represents only a two month slip from the planned schedule. The slip is due to delays in missile deliveries from the contractor.

QUESTION: What affect will the above slippage in operational testing have on the Navy's decision for full production of the Laser Maverick?

ANSWER: Approval for full production (AFP) is dependent on successful completion of the second phase of operational testing (OT-IIB), therefore slippages in OT-IIB will delay the AFP decision by two months from September to November 1985.

QUESTION: If the Navy's decision is to continue limited production of the Laser Maverick because the missile has not completed operational testing, what affect will this decision have on the Navy's fiscal year 1986 budget request?

ANSWER: None. An AFP decision will be made in November 1985 prior to initiation of the FY 1986 procurement which is planned for December 1985.

QUESTION: What is the status of the Navy's attempts to qualify both the fuze and new container that will accommodate the larger warhead? What effect will these issues have on producing a quality missile within the required production schedule?

ANSWER: The fuze qualification was successfully completed in early April 1985. The container qualification testing is estimated to be complete by July 1985. These issues have no effect on producing a quality missile within the required production schedule.

QUESTION: If the development of the new container is delayed, what effect will this have on the handling, transportation, storage, and safety of the missile, especially aboard ships during rough seas?

ANSWER: The development of the new container will be completed in July 1985. A delay in this development would limit shipment of the missile outside CONUS to an emergency basis. Safety of the missile aboard ships will not be a factor.

QUESTION : In Fiscal Year 1984 the Navy was appropriated $5,000,000 for the PENGUIN Missile. For what purpose has the Navy obligated these funds?

ANSWER: The Navy has obligated the funds as follows:

Design, development, and qualification of the rocket motor and warhead to meet insensitive munitions requirements (Krongsberg Vapenfabrikk-Missile Prime Contractor)	$1,500,000

Aircraft (LAMPS MK III) avionics design and testing, system engineering, and interface definition (IBM)		$1,700,000
Navy Field Station Technical support		$1,350,000
. Naval Weapons Center, China Lake USN lead development laboratory for insensitive warhead and explosive fill qualification, testing and documentation and continuing systems engineering management.	$500,000	
. Naval Surface Weapons Center, Dahlgren Initial support for system engineering management and shipboard enginering support.	$350,000	
. Pacific Missile Test Center DT-II (TECHEVAL) planning and support.	$250,000	
. Naval Air Test Center, Patuxent River Safe separation and jettison flight testing and launch envelope establishment.	$150,000	
. Naval Weapons Handling Center, Earle All-up round shipping container design qualification and documentation and support for container fabrication	$100,000	
Ship alteration design and installation for FFG-7 Class ships (NAVSEA)		$100,000
Standard Airborne Computer (AN/AYK-14(V)) for the SH-60B		$350,000
TOTAL		$5,000,000

QUESTION : For fiscal year 1985 the Navy was appropriated a total of $38,000,000 from three separate budget activities for the PENGUIN related program. The activities were research and development $14,600,000, APN $11,700,000 and $11,700,000 for WPN. For each of the three activities explain how the Navy intends to utilize the funds.

ANSWER: FY 1985 PENGUIN requirements by budget activity are presented below.

RDT&E: Total authorized was $14,400,000. An urgent reprogramming of $3,100,000 reduced the total authorized to $11,300,000.

Ship alteration design and installation for FFG-7 class ships (NAVSEA)	$1,200,000
Design modification, qualification and fabrication of: the missile control system and umbilical, the automatic test station, the missile simulator, test	$2,900,000

missiles and missile components (Krongsberg Vapenfabrikk)		
Continued insensitive munitions development (Krongsberg Vapenfabrikk)		$3,200,000
Aircraft avionics integration development and testing (IBM)		$1,800,000
Aircraft structural modification design and installation, pylon design, missile release system design, safe separation analysis, test support and documentation (Sikorsky)		$700,000
Navy Field Station Technical Support		$1,500,000
. Naval Weapons Center, China Lake	$500,000	
. Naval Surface Weapons Center, Dahlgren	$400,000	
. Pacific Missile Test Center	$300,000	
. Naval Air Test Center, Patuxent River	$200,000	
. Naval weapons Handling Center, Earle	$100,000	
TOTAL		$11,300,000

APN: Funds in the amount of $11.7M appropriated as budget activity 5 were reprogrammed via DD1415 to budget activity 1 (SH-60B Procurement). Intended use follows:

Sikorsky A/C structural Modification	$1,300,000
IBM Avionics/System Integration	$600,000
Available for Reprogramming	$9,800,000
TOTAL	$11,700,000

Estimates for Sikorsky and IBM efforts total $1.9M. After the actual prices for these efforts are determined, the difference between the total and the $11.7M appropriated will be reapplied to other requirements within the appropriation.

WPN: The entire $11,700,000 has been applied to an undistributed Congressional reduction.

QUESTION: Why was the PENGUIN missile chosen for this particular Naval mission rather than competing the requirement among U. S. firms?

ANSWER: A study conducted by the Center For Naval Analysis in 1984 evaluated options to provide an Antisurface Warfare capability for the LAMPS MARK III. Considerations such as weight, range and effectiveness were included. The study concluded that LAMPS MK III when armed with PENGUIN can be a valuable ASU system offering tactical advantages that can not be

obtained by other means. A combined US Navy TECHEVAL/OPEVAL of a ship launched version of PENGUIN was completed in April 1982. OPTEVFOR concluded PENGUIN is operationally effective and has the potential to be operationally suitable.
These facts along with Congressional commitment to a "two way street" agreement with Norway makes the need to compete the requirement among U. S. firms undesirable.

QUESTION : What modifications will be required by the Navy to the Norwegian PENGUIN missile after it is received from the Norwegian contractor and what will they cost?

ANSWER: No modifications will be required to the PENGUIN missile hardware received by the USN from the Norwegian contractor. The PENGUIN missile is a "modular" weapon and final assembly of missile sections will be accomplished at a naval weapon station. The cost for this final assembly is estimated at $3,000 per missile and is included in the funding requirements.

QUESTION : Explain the function of the PENGUIN missile launch adapter. In which country will the adapter be produced?

ANSWER: The PENGUIN missile launch adapter provides the physical and electrical interfaces between the aircraft, the aircraft avionics and the missile. The launch adapter consists of two major subassemblies. The "Missile Release System", which provides the physical structure to carry and release the missile from the helicopter, will be designed and produced by Sikorsky. The "Missile Control System", which provides the electronics required to integrate the aircraft avionics with the missile avionics, will be designed and produced by Krongsberg Vapenfabrikk.

QUESTION : How many aircraft does the Navy plan to modify for the PENGUIN aircraft integration program?

ANSWER: The Navy will modify a total of 126 SH-60B aircraft with structural provisions required for installation of a PENGUIN "Kit". Twenty-eight PENGUIN "Kits" will be procured.

QUESTION: What will be the cost of the PENGUIN aircraft integration program?

Answer: The PENGUIN aircraft integration program will cost $36,300,000. The cost by appropriation and fiscal year follows:

($M)

	FY84	FY85	FY86	FY87	FY88	TOTAL
RDT&E	2.0	2.5	9.0	1.1	.6	15.2
APN-1		1.9	1.2	.9	17.1	21.1
						36.3

QUESTION : What modifications will be required to the FFG-7 class ships to handle the PENGUIN missile? How many ships does the Navy envision modifying? What will be the cost of these modifications?

ANSWER: The following modifications are required to the FFG-7 class ship:

- Modify Magazine Stowage
- Modify MK24 dolly Adapter
- Provide Magazine Blow-Out Patches
- Provide Missile Restraints
- Extend False Deck
- Provide 4 Missile Motor Shrouds
- Provide Stowage for PENGUIN deflectors

Thirty three ships will be modified to accommodate the PENGUIN missile. The cost of ship modification is estimated at $25,800,000 (lead-ship plus 32 additional ships).

QUESTION : Please provide the committee a chart showing the overall program structure and timing of integration of the PENGUIN missile, aircraft and ship overhauls.
ANSWER: Figure 1 shows PENGUIN Program Master Schedule.

QUESTION : What U. S. Contractors will participate in developing and producing major components of the PENGUIN system?
ANSWER:

International Business Machine - Avionics Modification and System Integration

Sikorsky - Aircraft Structural Modification, Missile Release System and Aircraft Pylons

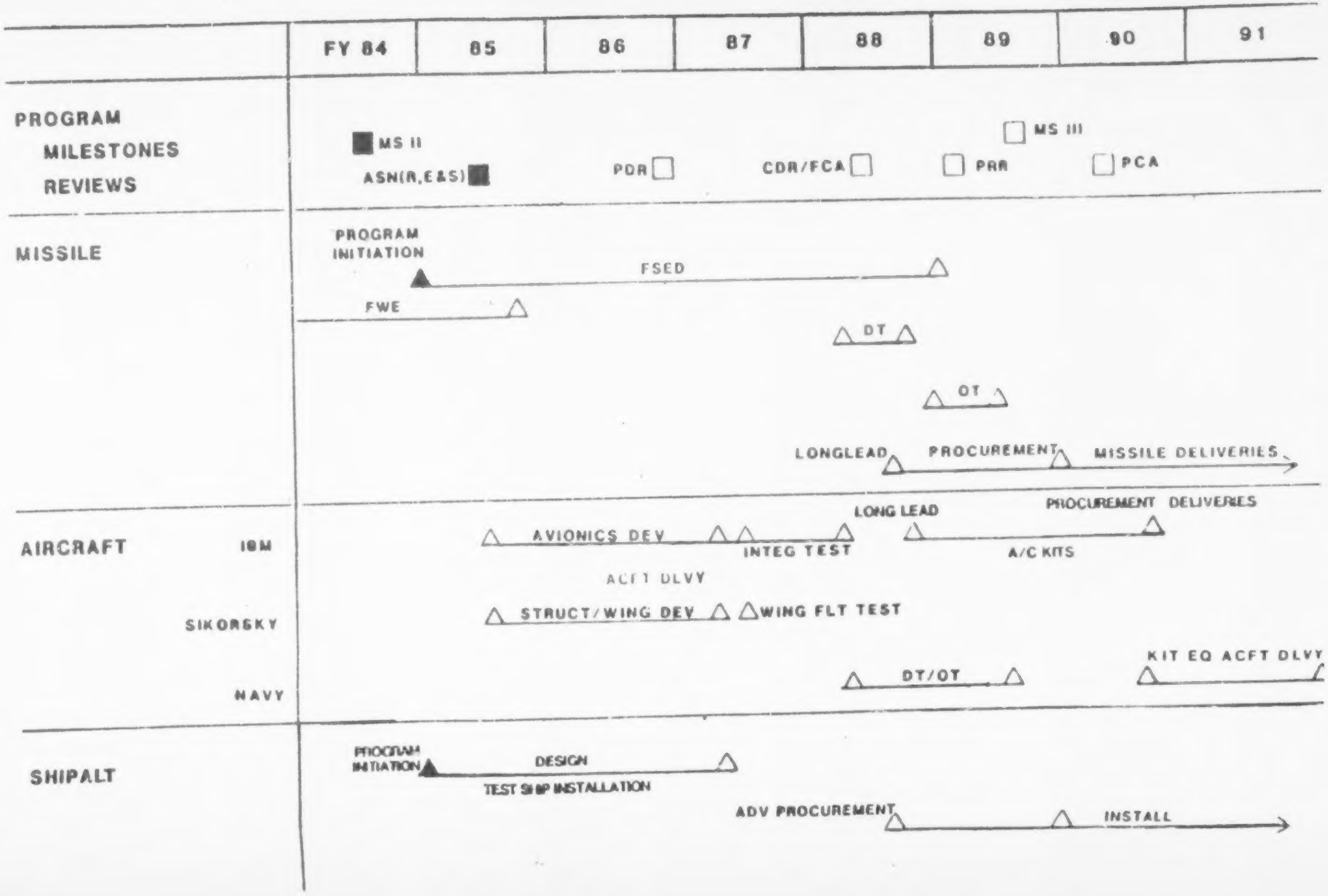
Grumman Aircraft - Missile Wings

Hercules Corp. - Rocket Motor (contract from Raufoss Co. of Norway)

QUESTION : On what date was the PENGUIN missile MOU executed with the Norwegian Prime contractor for the missile?
ANSWER: An MOU between the United States Navy and Chief of Navy Material Command Norway was signed on 27 April 1979 for the acquisition of the PENGUIN Missile System. A revised MOU is in preparation to cover the development program.

QUESTION : Does the PENGUIN missile duplicate the mission of any other naval weapon presently in the fleet or being developed?
ANSWER: The PENGUIN missile provides the LAMPS helicopter with a valuable ASUW system offering tactical advantages that can not be obtained by other means. In senarios where both HARPOON and PENGUIN can be employed PENGUIN and HARPOON are complementary. The PENGUIN provides a immediate offensive defensive capability that is self-contained within the helicopter. This provides an operational advantage in scenarios where communications between the helicopter and the FFG-7 are disrupted and the ship-launched HARPOON can not be targeted. PENGUIN can be employed from LAMPS MK III at ranges greater than maximum HARPOON range. The unique PENGUIN capability, not found in other missiles, is its capability for selective targeting in scenarios of close target formation, targets in close proximity to commercial shipping and targets in close proximity to shore installations.

FIGURE 1-PROGRAM MASTER SCHEDULE



QUESTION : Provide a full description of the Navy's PENGUIN program, including a milestone schedule and complete RDT&E and procurement funding profiles by fiscal year.

ANSWER: The US Navy's PENGUIN Program is designed to make maximum use of the technology and hardware already existent in the Norwegian MK II MOD 3 ship-launched version of the missile and their MK III fixed wing aircraft (F-16) launched version. The MK II, MOD 7/LAMPS MK III version uses the same basic structure, and inertial navigator as the PENGUIN MK II, MOD 3 and the imaging infrared seeker and guidance unit of the PENGUIN MK III missile. Modifications being are made only as required to adapt the missile to the LAMPS MK III flight envelope to provide the physical and electrical interfaces for LAMPS MK III integration and to make the missile (warhead and rocket motor) compatible with US Navy requirements for insensitive munitions. The scope of the Navy program is as follows:

• Ships To Be Modified	33
• Aircraft Modified	126
• Pylons Per Aircraft	1
• Aircraft Missile Kits	28
• Naval Weapon Stations (Intermediate Maintenance)	1
• Surveillance testing	4 per year
• Pipeline (15%)	25 missiles
• Insensitive Warhead & Rocket Motor	
• Missiles	193

The funding profile is attached as Figure 2 and reflects a total program cost of $172,100,000 through the estimated ten year life of the program. The answer to question 12 provides key milestones for the Navy's program.

FIGURE 2 - PENGUIN PROGRAM COST SUMMARY
(THEN YR. $ - MILLIONS)

QUANTITY	FY84	85	86	87	88	89	90	COMP.	TOTAL
DEVELOPMENT		7	9						16
PRODUCTION					100	93			193
FUNDING									
RDT&E,N	5.0	11.3	19.6	6.0	2.0				43.9
WP,N					36.9	38.5	1.3	12.0	88.7
AP,N		1.9	2.7	10.9					15.5
O&M,N					.7	1.9	9.8	11.1	
TOTAL	5.0	13.2	22.3	16.9	39.6	40.4	11.5	23.6	172.1

SPARROW AIM/RIM-7M

The AIM/RIM-7M Sparrow is a semi-active, medium range intercept missile used in air-to-air and ship-to-air applications in several U.S. weapon systems. The Sparrow is being jointly produced by Raytheon Corporation and General Dynamics.

For fiscal year 1986 the Navy is requesting $359.2 million for procuring 1,872 Sparrow missiles.

QUESTION: Has the Navy made a decision concerning the merits of maintaining two producers of the Sparrow missile considering the Air Force's substantial reduction of inventory requirements?

ANSWER: The Navy considers competition and maintaining two sources to be worthwhile into the early 1990s.

QUESTION: Is the Navy still planning to procure AMRAAM as a replacement to the SPARROW missile in FY 1989?

ANSWER: Navy funding for the procurement of the AMRAAM missile begins in FY 1988.

QUESTION: In fiscal year 1985 the Navy obligated $3.8 million for fleet support test equipment. The Navy's fiscal year 1986 budget request is $11.9 million for similar test equipment. Why is there such a substantial increase in the test equipment line item?

ANSWER: These funds are for a dedicated AIM/RIM-7F/M depot level repair facility at NARF, Alameda, CA. Lower level test equipment will be purchased to test, repair, recertify trays, units and modules of the AIM/RIM-7F/M missiles. None of this equipment exist now. Depot level repairs are presently being performed by the two contractors.

STANDARD MISSILE - 1 MR

The Standard Missiles (SM), which use common components, are supersonic surface-to-air and surface-to-surface tactical missiles. Three basic variants of Standard missiles are currently in production: two medium range variants (SM-1 MR and SM-2 MR) and one extended range variant (SM-2 ER). The SM-2 MR and SM-2 ER technical advances have improved range, accuracy, and electronic countermeasure resistance over the SM-1 variant.

The fiscal year 1986 Weapons Procurement, Navy (WPN) budget request includes $35.9 million for SM-1 MR, $509.7 million for SM-2 MR, and $312.2 million for SM-2 ER.

QUESTION: According to the Navy's fiscal year 1986 budget submission, the Navy intends to stretch the fiscal year 1985 procurement of 600 SM-1 MR missiles over both 1985 and 1986. This will result in the delivery of 300 missiles for both the fiscal years 1985 and 1986 funded delivery period. The implementation of the deliveries over a 24 month period rather than the contracted 12 month period will result in increased cost and will be negotiated by a separate modification to the contract with General Dynamics. How much of the fiscal year 1986 budget request is associated with the stretchout of the fiscal year 1985 procurement of 600 SM-1s?

ANSWER: None of the funds requested for FY-86 are associated with the stretchout. However, the FY-85 column of this year's request does reflect an increase of $9.0 million above the FY-85 SM-1 appropriation to fund the anticipated cost of the stretchout.

QUESTION: During a recent GAO visit to the contractor's facility, officials stated that the Navy is considering changing its strategy for procuring Standard missiles. According to these officials, the Navy is considering delivery of the 600 SM-1s during the fiscal year 1985 funded delivery period and then closing the SM-1 production line. If the Navy terminates SM-1 production with the fiscal year 1985 procurement, will the advanced procurement funding of $9.5 million for the rocket motor and initial spares funding of $1 million still be required?

ANSWER: Yes; the rocket motor advance procurement funds are required to fund the final increment of an existing multi-year procurement. If the rocket motor multi-year is broken, we estimate termination costs to be about $5 million. The rocket motors procured in FY-86 will be applied to FY-87 SM-1 procurement and the FY-87 budget projection has been reduced accordingly. If a decision was made not to fund continued SM-1 procurement, these rocket motors could be used to satisfy rocket motor requirements planned for funding in the STANDARD Missile Mod line beginning in FY-87.

QUESTION: What additional costs are associated with converting ships, for the usage of SM-2 MR, which were previously identified to receive SM-1 MR?

ANSWER: The cost to convert SM-1 ships to fire SM-2 MR is under study. Preliminary estimates are approximately $26 million for non-recurring RDT&E and an OPN cost of $7 million per ship to convert the FFG-7 class to fire the SM-2 missile.

MK-46 MOD 5 (NEARTIP) TORPEDO

The Torpedo MK-46 Mod 5 Near Term Improvement Program is an improved version of the earlier generation MK-46 torpedo. It features an acoustic system and countermeasures resistance capability that is designed to increase performance. It can be launched from surface ships, aircraft, and helicopters.

In fiscal year 1986 the Navy is requesting $105.5 million for 500 MK-46 Mod 5 torpedoes and $91.9 million for 672 MK-46 Mod 5 torpedo kits and $32 million for advance procurement. The fiscal year 1986 request is for the first year of a three year multiyear contract. The fiscal year 1986-88 multiyear program is requesting 500 MK-46 Mod 5 torpedoes and 1663 MK-46 modification kits.

QUESTION: According to the Navy's MK 46 Program Office the unit price of the MK-46 Mod 5 Torpedo increased 19 percent from the 1983-85 multiyear procurement to the 1986-1988 multiyear procurement. What is the cause of such a significant increase in unit price?

ANSWER: Increase in unit price from the FY 83-85 multiyear contract to the proposed FY 86-88 multiyear contract is associated with escalation from a unit price that will be negotiated in FY 86. There is an additional unit price increase as the result of the reduction in the all up round units from 3205 to only 1500 (Vice 500 in lead paragraph).

The FY 1986-88 multiyear contract is to procure 1500 MK-46 Mod 5 torpedoes and 1663 MK 46 modification kits. This represents 3163 equivalent electronic units and 1500 propulsion units and warheads. Total projected savings of this multiyear program, versus three annualized procurements, is $51.4 million and is predicated on the procurement of both torpedoes and modification kits.

QUESTION: What effect does Honeywell's producing the new MK-50 Lightweight Torpedo and the MK-46 Mod 5 Kits have on the unit price of the MK-46 Mod 5 Torpedo in the 1986-1988 multiyear contract?

ANSWER: At the time of negotiation, DCAS & DCAA will determine overhead and burden rates. Co-production of both MK-50 and MK-46 in their production facilities during fiscal years 87 and 88 would normally result in a lower overhead and burden rate and savings to both programs. However, due to the low initial Torpedo MK-50 production rate, minimal savings are anticipated. These have been incorperated in the budget estimates.

QUESTION: What was the Navy's methodology used in determining the unit cost for the 1663 MK-46 Mod 5 kits covered in the fiscal year 1986-1988 multiyear procurement program?

ANSWER: Since all components of the MK 46 Mod 5 Kits are also components of the torpedo, soct estimates for both contractual costs and expected cost avoidance are based on cost estimating models derived from actual costs associated with the FY 83-85 torpedo MK 46 multiyear procurement and are considered to be sound and realistic. Inflation and quantities were also factors in determining unit costs.

QUESTION: According to Defense officials the Foreign Military Sales for the MK-46 Mod 5 torpedo will amount to 1475 between FY 86-88 . What clauses exist in the fiscal year 1986-1988 multiyear contract regarding FMS?

ANSWER: Foreign Military Sales (FMS) applied to the FY 1983-1985 MK 46 Multiyear program totaled 258 torpedoes. A letter contract for these torpedoes was signed in May 1985. The Navy does not anticipate 1475 additional FMS sales between FY 1986-1988. Nevertheless, the contract will include a special provision which will permit renegotiation of the average unit price per torpedo and related equipment to reflect the appropriate price decrease resulting from procurement of additional quantities.

QUESTION: According to some Defense officials, the MK-46 program may encounter problems acquiring some electronic parts because these parts are considered obsolete and are no longer being manufactured. What is the Navy strategy for overcoming the problem and what additional costs to the program will result?

ANSWER: The MK-46 Program has encountered only minor obsolete parts problems. The contractor has been analyzing the parts to determine if direct substitution, redesign to a replacement part or lifetime buy of individual components is their best alternative. Obsolete parts have not caused work stoppage and no additional costs are anticipated.

SUBMARINE LAUNCHED MOBILE MINE (SLMM) MK 67

QUESTION: According to the SLMM program office the significant slippages in the SLMM program have resulted from incomplete documentation of designs of several unique mine components, particularly the auxiliary control unit MK 188. Has the Navy now corrected its documents on these unique mine components and have the corrected drawings been provided to the prime contractor?

ANSWER: The slippages in the SLMM program were the result of Dewey Electronics Corporation failure to meet established delivery dates, minor documentation errors and documentation interpretation. We have resolved all documentation issues and Dewey Electronics is producing the unique mine components needed for SLMM to corrected drawings. Dewey has delivered first lots of all components required by the Naval Warfare Engineering Station, Keyport, Washington, and that station is now building Mine Main Assemblies.

QUESTION: What were the original delivery schedules established for the SLMM program in fiscal years 1982 through 1985? What are the current delivery schedules? What increased costs have occurred as a result of these delays?

ANSWER: The original delivery schedules established for the SLMM program for FY 1982 through FY 1985 are as follows:

Budget Submit	Start Fleet Deliveries
FY 1982 (January 1981)	May 1983 (Assumed contract award March 1982)
FY 1983 (January 1982)	November 1983
FY 1984 (January 1983)	May 1984
FY 1985 (January 1984)	May 1984

The current delivery schedule specifies initial fleet deliveries in September 1985. This schedule is being progressed and monitored daily and every milestone is being achieved either ahead of or on schedule. Direct delay costs have been prevented by managing the production line activity at Naval Undersea Warfare Engineering Station, Keyport, WA. This production line is now building complete mine main assemblies.

QUESTION: According to officials at the Naval Undersea Warfare Engineering Station (NUWES), who are responsible for assembling the SLMM mine main assembly, Dewey Electronics has been unable to deliver five major components covered under its 1982 through 1985 contract. What are the components of the SLMM that Dewey Electronics has not delivered under the 1982 through 1985 contract?

ANSWER: Dewey is in production and delivering components for each year's contract or option. The five major components that had had delays were the Adapters Mk 136 and 141, the Auxiliary Control Mk 188, Explosive Section Mk 13 and the Exercise Head Mk 91. All are now on schedule. There are about sixty separate items in each contract. The 1982 contract is over 80 percent complete, and the options are over 50 percent complete.

QUESTION: Of the five components under the 1982 contract which Dewey Electronics has not delivered, which components are required by NUWES to assemble the mine main assembly?

ANSWER: Dewey Electronics has delivered the components required and NUWES is assembling mine main assemblies. The component that had caused earlier delays was the Auxiliary control Mk 188.

QUESTION: For fiscal year 1982 through 1985 the Navy was appropriated $77 million in WPN funds for the SLMM program. The production and assembly of the SLMM involves several contractors and Naval facilities. For the above four fiscal years what SLMM funding was available, expended and unobligated by activity involved in the SLMM program?

ANSWER:

Dollars (k) by Fiscal Years

	1982	1983	1984	1985
Available:	10,799	21,494	22,106	22,600
Expended:				
Aerojet Tech Systems	-	392	361	-
Dewey Electronics	4,113	7,473	6,617	6,205
ABC Contractor	-	-	25	-
DEF Contractor	-	-	-	3,084
A&W Fabricators	-	272	-	-
XYZ Contractor	-	-	-	437
COMINFWARCOM	-	568	900	-
Fleet Analysis Center	80	225	181	229
Gage and Standards	40	254	237	220
NAVORDSTA Indian Head	334	569	506	403
Naval Surface Weapons	855	1,302	1,633	1,416
NUWES Keyport	2,659	4,967	4,851	4,989
Naval Mine Warfare Eng Act	499	502	618	668
Naval Weapons Handling Center	5	15	15	20
Naval Weapons Station, Yorktown	650	1,246	1,129	1,143
Metrology Engineering Center	-	-	-	20
SPCC	1,521	3,519	3,397	5
Unobligated:	43	190	1,636	3,761
TOTAL	10,799	21,494	22,106	22,600

QUESTION: Why did the Navy make the decision to commence full production of the SLMM before completing first article testing of the mobile mine?

ANSWER: The Navy required first article testing on all critical SLMM components before Dewey started volume production for that component. All components required to assemble SLMMs at NUWES have passed first article testing. Normal first article testing procedures have been followed in the SLMM program.

QUESTION: Why didn't the Navy suspend production of the SLMM until the design problems could be detected and corrected?

ANSWER: The problems that caused the delay in this program were in transitioning an approved design into production procedures, processes and lower level drawings. The problems have been identified and solved. If production had been stopped, there would have been no way of proving the engineering solutions to these production problems.

QUESTION: Why did the Navy award Dewey Electronics a fiscal year 1985 contract for unique mine components for 280 units when the contractor had been unsuccessful in providing all the line items under its previous SLMM contracts?

ANSWER: For the FY 1985 contract, a competitive, small business set aside IFB was issued for a fixed price contract. Dewey Electronics was the sole bidder. Technical solutions were in place for earlier problems. The contract was awarded because fair competition existed and Dewey now has the capability to build all items in the contract. Dewey has maintained the schedule for deliveries for the earlier contract that was effective at the time of the award.

QUESTION: What naval requirement will SLMM meet and how is that threat being countered presently? How would the SLMM be an improvement over what the Navy currently uses to meet that threat?

ANSWER: SLMM provides a covert, stand-off mining capability that presently does not exist in the Navy inventory.

QUESTION: What is the range of SLMM? Could such a range place the submarine and its crew in a substantial risk of enemy attack if detected?

ANSWER: The range of SLMM is [deleted]. The stand-off capability of SLMM lessens the submarine's chance of detection in contrast to the use of a non-propelled mine. SLMM permits the submarine to deploy mines from deep water. Risk of enemy attack is dependent upon the geographic location of each mine field but will almost always be reduced with increases in stand-off range.

QUESTION: According to Navy officials several components contained in the Mk 37 torpedo have not been produced for nearly 25 years and are presently in short supply or do not exist. How will this shortage of parts affect the Navy's ability to produce its total SLMM requirement?

ANSWER: The shortage of Mk 37 Torpedo parts will not affect the Navy's ability to produce its total SLMM requirement. NUWES is producing the Main Assembly for SLMM using Fleet-return Torpedoes Mk 37 and can repair defective torpedo components. Sufficient Torpedoes Mk 37 are available to compensate for an expected fallout of components and still produce the total SLMM inventory requirement. A planned product improvement program is underway to replace torpedo vacuum tube components with solid-state components to enhance future program reliability and maintainability.

QUESTION: What is the Navy's current inventory of Mk 37 torpedoes by MOD's and of this total, how many are dedicated to the SLMM program?

ANSWER: (C) The current Navy inventory of Torpedoes Mk 37 Main Assemblies is (d) of which (d) are reserved for the Swimmer

Weapons System and the rest are reserved for SLMM. Main Assemblies by MOD are divided as follows:

Mod 0 (Deleted)
Mod 1 (Deleted)
Mod 2 (Deleted)
Mod 3 (Deleted)

QUESTION: What modification to U.S. submarines will be required to enable it to carry and fire the SLMM?

ANSWER: For 594/637 Class submarines with the Fire Control System (FCS) [deleted] the modification consists of a simple cam change requiring approximately 30 minutes to complete. For [deleted] a temporary computer tape modification, already developed, is required. A permanent computer tape modification is being developed and will be operational in Fiscal Year 1987 for [deleted] and Combat Control System [deleted].

QUESTION: How many submarines does the Navy plan to modify to carry the SLMM? What is the cost of the submarine modifications?

ANSWER: The Navy plans to modify [deleted] · and (d) Class submarines, [deleted] Class submarines and a minimum of [deleted] SUBACS Class submarines. For the 594/637 Class, the cost of the modifications to carry SLMM are tied in with other system changes and it is not possible to separate distinct SLMM costs. All hardware for these ships has been procured. For the 688 Class, the total costs for fire control system and handling equipment design, procurement and installation are $24 million for all 39 submarines in the Class. For the SUBACS Class, costs have not been determined.

QUESTION: If the SLMM's primary mission is to covertly mine an enemy's harbor without detection, why is it necessary to produce and stockpile such a unique weapon at many locations around the world when it is unlikely more than one harbor at a given time would ever be mined in this manner?

ANSWER: SLMM can be used to mine straits and coastal areas as well as enemy harbors and also to mine flanks of deep ocean area minefields. Stockpiles are maintained at [deleted] to provide adequate reaction time in loading and deploying submarines once the decision to mine has been made.

QUESTION: What is the effect on the Navy's ASW mission if the SLMM program is deleted from the fiscal year 1986 budget?

ANSWER: If the SLMM program is deleted from the FY 86 budget, the Navy will not only lose the 280 mines planned for procurement but will also have insufficient funds to conduct quality and acceptance testing for the 522 mines procured in FY 84 and FY 85. These disruptions would have a [deleted].

GENERAL PURPOSE BOMBS

QUESTION: The procurement lead times used by the Navy and Air Force in their fiscal year 1986 requests for FMU-139 fuzes are 30 months and 14 months, respectively. Last year the Navy used a 20 month lead time. Why has the Navy increased the procurement lead time from 24 months in its fiscal year 1985 program to 30 months in its fiscal year 1986 program?

ANSWER: The 30 month procurement lead time applicable to the initial production year (FY 1983) was inadvertently shown for FY 1986. The procurement lead time for the FY 1986 program is 21 months (9 months administrative lead time and 12 months production lead time).

QUESTION: Are undelivered prior year programs precluding earlier delivery of the fiscal year 1985 program?
ANSWER: No.

QUESTION: Why is the Navy procurement lead time more than twice that of the Air Force?
ANSWER: The Navy's procurement lead time is not twice that of the Air Force. The FY 1986 procurement lead times of 30 months and 14 months that were listed for the Navy and Air Force respectively are not in accordance with the FMU-139/B program schedule and are thereby incorrect. The FY 1986 procurement lead time for both services is 21 months.

QUESTION: What is the appropriate procurement lead time for the fiscal year 1986 program?
ANSWER: The FY 1986 procurement lead time is 21 months for the current procurement and 26 months for the Second Source producer.

QUESTION: The planned fiscal years 1985 and 1986 programs exceed current production capacity levels. Funds to facilitize a second source for the fiscal year 1985 FMU-139 program were deleted during the Army's fiscal year 1985 budget process and not restored. As a result, the Navy plans to solicit proposals from contractors willing to provide their own funding for facilities. Will a second source be available to produce fuzes within the fiscal year 1985 funded delivery period? If not, how does the Navy plan to increase current production capacity?
ANSWER: The current plan calls for award of a contract to a second source by July 1985, first article testing August-October 1986, and approval of first article by November 1986 with deliveries from January 1987 thru October 1987. This equates to a period of 37 months and is one month outside the FY 1985 funded delivery period. Motorola has capability to surge to build 32,000 units per month based on 3 shifts per day and would be able to produce the budgeted quantity of units if the second source is not approved.

QUESTION: The Navy's fiscal year 1986 procurement request for the MK-83 bomb is based on a unit price of $3,813; however, the single manager's unit price as of February 5, 1985 was $1,876.74. What is the reason for the unit cost difference?
ANSWER: The Single manager price is based on the standard MK-83 filled with H-6 explosive but does not include $117.13/Bomb for GFM and $58.04/Bomb as a CAWCF adjustment which makes the actual cost of the standard MK-83 GP Bomb $2,051.91 vs $1,876.74. The budget price is based on an improved MK-83 (newer steel and base plate design) filled with PBX(W)-109E(I) explosive. PBX(W)-109E(I) is an insensitive high explosive (IHE) which is being incorporated to improve storage, handling and employment safety. The significant cost differences from the current H-6 filled MK-83 are:

PBX increase over H-6	$727.82
New Steel Body	486.97
Load, Assemble and Pack	546.25
	$1,761.04

QUESTION: What is the appropriate unit cost?
ANSWER: $3,812.95

WALLEYE

QUESTION: As a result of Operational Testing and Evaluation (OT&E) for Phase I, the ER/DL Walleye I was recommended for fleet introduction with A-7E aircraft only. It was recommended that additional testing be done with the F/A-18 aircraft to verify correction of several discrepancies noted during the testing.

Have the discrepancies noted during the OT&E been corrected?

ANSWER: The discrepancy discovered during the OT-IIIA test of the Walleye weapon in the F/A-18 was an aircraft wiring error. The problem was corrected.

QUESTION: If so, have the additional tests with the F/-18 aircraft been completed?

ANSWER: Yes. Tests to verify correction of the wiring error have been successfully completed.

QUESTION: If not, when is additional testing wtih the F/A-18 planned?

ANSWER: N/A.

QUESTION: If discrepancies noted during OT&E have not been corrected, please explain why.

ANSWER: N/A.

QUESTION: Walleye ER/DL phase II technical evaluation was conducted on A-7E, A-7C, and TA-7C aircraft. If this weapon is also to be used with the F/A-18 aircraft, why were not tests also conducted using the F/A-18?

ANSWER: Technical evaluation of Walleye ER/DL Phase II in F/A-18A aircraft was conducted during the period June, 1981 to November, 1983. Results are documented in Naval Air Test Center Report No. SA-109R-83 dated 29 June 1984 "Compatibility Evaluation of Walleye I Weapon and Data Link Pods with the TF/A-18 Aircraft". All reported deficiencies have been corrected.

QUESTION: OT&E for the phase II Walleye conversion program was planned for July 1984 with approval for service use in November 1984. The OT&E has slipped to April 1985.

Why has the testing program slipped?

ANSWER: The test program has slipped because of problems discovered with the AN/AWW-9 data link pod on the F/A-18A aircraft. These problems were discovered after completion of the Walleye weapon tests. One problem was an aircraft-pod interface which caused an uncommand shut-off of the pod. This problem has been corrected. The second problem has to do with aircraft shielding which caused distoration of the pod antenna pattern. This problem is still being investigated with the pod installed on the centerline station. Satisfactory solution of this problem is expected by June, 1985.

QUESTION: When do you now expect the phase II conversion program to be approved for service use?

ANSWER: 1st quarter CY1986.

QUESTION: The fiscal year 1986 funding request is to convert 300 Walleye bombs.

Is this conversion program for phase I or phase II configurations?

ANSWER: The FY 1986 conversion program is for the phase II configuration.

QUESTION: What is the development status of the AWW-9 data link pod which is used with the phase II configuration?

ANSWER: Development is complete.

QUESTION: Has funding been requested in the fiscal year 1986 budget for the AWW-9?

ANSWER: Yes, the FY 1986 APN budget contains a request for 10 AWW-9 pods.

QUESTION: If so, how much and how many are being procured?

ANSWER: $3.2 million has been budgeted for the procurement of 10 units in FY 1986. Data link pods are aircraft avionics equipment and are in the aircraft budget.

QUESTION: What is the delivery schedule for the AWW-9?

ANSWER: Delivery rate is 2 per month starting in Jan 1988 and ending in Oct 1988.

QUESTION: The fiscal year 1986 retrofit program is predicated upon an engineering change proposal (ECP). This ECP, which involves replacement of the vidicon, was planned for approval in November 1984 but has now slipped until April 1985. Why has approval of the ECP been delayed?

ANSWER: Approval of the ECP has been delayed because of administrative and format problems. The ECP was submitted for approval in November 1984. The administrative and formatting problems required a major revision of the ECP. The revised ECP has been resubmitted with final approval expected in June 1985.

QUESTION: Due to different Walleye configurations, many different kits may be needed for the retrofit to be accomplished.

Has the Navy determined how many different kits will be required?

ANSWER: Yes, it is estimated that up to seven different kit configurations will be required for the planned retrofit of the entire WALLEYE inventory.

QUESTION: If not, when will the requirements by kit type and number be known?

ANSWER: N/A.

QUESTION: When is the retrofit program planned to begin and end and how many retrofits will be made monthly?

ANSWER: Start deliveries in July 1987. Complete deliveries in June 1994. Average monthly rate 52.

QUESTION: Please explain how the funds requested for retrofit will be used. For example, are they for both kits and installation or just the procurement of kits?

ANSWER: Retrofit funds will be used to procure kits and applicable non-recurring costs such as technical data, technical manuals, and initial logistics support. Kit installation is funded separately with O&M,N funds.

MACHINE GUN AMMUNITION

QUESTION: The January 1984 Initial Operational Test and Evaluation Phase III Quick-Look Report on the AV-8B aircraft and GAU-12/A gun system states that under certain conditions, target penetration and gun accuracy can be degraded and the probability of fragmentation damage to the aircraft can increase significantly. Further, the report states that the ammunition cross-feed mechanism is not satisfactory. This report also cites various other deficiencies applicable to the aircraft and/or other systems. Furthermore, the report states that if certain actions are not taken, operational effectiveness and operational suitability will be adversely affected.

Has the Navy solved the problems pertaining to target penetration, gun accuracy, aircraft fragmentation damage, and cross-feed mechanism? Please provide details of corrective actions taken and results of subsequent testing.

ANSWER: Target Penetration - API ammunition will penetrate 2 1/2 inces of armor. API has been successfully fired against the Russian T-62 and our M-47 medium armored tanks. Additional testing in target penetration will be conducted during the 4th quarter FY-85 in FOT&E.

Gun Accuracy - Total aircraft sighting system has been improved by McDonnell Douglas. The GAU-12/A, 25mm Gun System now accurately delivers projectiles to the aim point. Accuracy has been tested and verified during recent OPEVAL which ended 29 Mar 85. Final test results are in process of being completed.

Aircraft Fragmentation Damage - During strafing runs, the AV-8B sustained damage from projectiles ricocheting from the impact point. The safe escape envelope for aircraft firing the 25mm GAU-12 gun system did not fully define the trajectory of projectiles after target impact. This envelope has been redefined and is being used in the updated aircraft (AV-8B) flight procedure to properly and safely fire the gun system at all targets. Research is continuing to expand and/or verify the safe flight envelope and the 30 degree safety cone.

Cross-Feed Mechanism - The cross-feed mechanism consists of ammunition handling chuting which failed before attaining the 18,000 round firing minimum. After several redesigns and modifications to the chuting elements and assembly, a candidate was chosen and successfully tested to 18,000 rounds. Presently, a total production gun system is undergoing a 18,000 round confidence firing test for total system verfication with emphasis on the cross-feed mechanism. Also, the modified cross-feed mechanism which is now in the production unit, has been flown and fired repeatedly with no failures.

QUESTION: If the above deficiencies have not been corrected, how will they impact on the AV-8B flight envelope and are such restrictions judged to be acceptable?

ANSWER: The majority of the deficiencies have been corrected and the remaining ones are in the process of being corrected. The only impact on the aircraft flight envelope is the modificaition of the safe escape parameters for gun firing. This modification does not affect operational capability.

QUESTION: What actions have been taken to correct problems which adversely affect operational effectiveness and operational suitability? For each problem, please provide details of the actions taken and subsequent test results.

ANSWER: Penetration - There is currently a Product Improvement program funded to attain better armor penetration with the API round (E.G. - long rod fin stabilized penetrators, etc.)

Gun Accuracy - Solution to problem verified in OPEVAL. Gun fired accurately in air-to-surface and air-to-air banner work.

Aircraft Fragmentation - Analytical and experimental studies were initiated to define safe escape envalopes. Results have been implemented and additional testing/refinement is ongoing at NWC China Lake, CA.

Cross-feed - Engineering changes have been made and sucessfully tested. Problem is solved.

QUESTION: If there are still actions to be taken, when will they be completed?

ANSWER: Penetration - Further aircraft tests will be completed by 30 Sept 85. Ammunition PIP finish date is not established. Present API ammunition is considered adequate for the majority of threat targets.

Gun accuracy - completed.

Fragmentation - Safety envelope verification to be completed by 1 August 1985.

Cross-feed - Full-up production system confirmation test (18,000 rds) will be completed by 30 June 1985.

QUESTION: How have the above problems affected the delivery schedules for the AV-8B aircraft and GAU-12/A gun systems? Please provide current delivery schedules for both items.

ANSWER: No major effects on schedule due to deficiencies noted (see attached Gun & A/C schedules)

QUESTION: Please provide your on-hand inventory for all 25mm cartridges as of February 28, 1985, and due-ins through the fiscal year 1985 program.

ANSWER:

	(THOU)
A979 25mm API	
28 Feb Inventory	(Deleted)
Due-in FY-1985 Delivery	(Deleted)
A980 25mm HEI	
28 Feb Inventory	(Deleted)
Due-in FY-1985 Delivery	(Deleted)
A978 25mm TP	
28 Feb Inventory	(Deleted)
Due-in FY-1985 Delivery	(Deleted)
A968 25mm Dummy	
28 Feb Inventory	(Deleted)
Due-in FY-1985 Delivery	(Deleted)
A977 25mm HPT	
28 Feb Inventory	(Deleted)
Due-in FY-1985 Delivery	(Deleted)

QUESTION: How many tactical AV-8B aircraft with GAU-12/A gun systems does the Navy have.

ANSWER: Currently there are 10 AV-8B aircraft in the inventory with three GAU-12/A gun systems. Two production gun systems were shipped Mar 85 to Cherry Point for a total of five systems this date.

QUESTION: If there are still unresolved problems and actions to be taken before the AV-8B aircraft with the GAU-12/A gun system can successfully complete operational evaluation and obtain approval for service use with an unrestricted flight envelope, why does the Navy need its fiscal year 1986 25mm funding request?

ANSWER: The flight envelope is still restricted due to earlier gun gas ingestion. These will be resolved with an upgraded aircraft fuel control and air intake modification. FOT&E will verify correction and expanded filght envelope in FY-1986.

QUESTION: The Research and Development (R&D) program to retrofit 30mm guns on the A-4 and F-4 has not been funded.

Why is the Navy requesting funding for 30mm ammunition prior to funding the R&D aircraft retrofit program?

ANSWER: The R&D program will not be an aircraft retrofit effort, rather a form, fit and function effort for the 30mm GPU-5/A Gun Pod on the A-4 and F-4 aircraft. Funding for this R&D effort is not included in the FY 1986 Budget. However, due to the twenty month lead time of the 30mm ammunition the planned FY 1986 procurement would result in available inventory assets upon completion of the R&D effort.

QUESTION: When the R&D program to retrofit the applicable aircraft with 30mm gun system is completed, how many aircraft by type will be retrofitted with 30mm gun system?

ANSWER: Since the 30mm gun system is a gun pod the aircraft will not be retrofitted. However, whatever modification to be made to the A-4 and F-4 would be determined in the required fit, form and function program. The gun pods will be issued as an organizational asset and will be utilized as mission role equipment. 196 aircraft will be in the inventory and gun pods will be procured to support inventory.

QUESTION: Who will retrofit the aircraft with 30mm gun system? Please provide a retrofit schedule and costs.
ANSWER: Since the gun pod is not an integral piece of aircraft equipment, there are neither retrofit costs or schedules.

QUESTION: What approvals and testing will be required for this program and what are the various applicable milestone dates.
ANSWER: Since the funding for RDT&E of the GPU-5/A gun pod compatibility study aboard the A-4 and F-4 was deleted prior to the implementation of the program no milestone dates have been established.

PRACTICE BOMBS

QUESTION: The Navy's procurement lead time used in its fiscal year 1986 budget request for the MK-76 and MK-82 is longer than actual experience, as shown below.

MK-76 Procurement Lead Times (months)

	FY 1986 Budget Estimates	Actual FY 1984 Program	Difference From Latest Actual
Administrative	6	8	-2
Production	9	3	+6
TOTAL	15	11	+4

MK-82 Procurement Lead Times (months)

	FY 1986 Budget Estimates	Actual FY 1983 Program	Difference From Latest Actual
Administrative	14	13	+1
Production	16	7	+9
TOTAL	30	20	+10

For the above items, why are Navy budget lead times different than actual lead times?
ANSWER: In the examples cited above the Navy is not able to confirm the actual FY 1984 production leadtime of 3 months for the MK 76 and the 7 month production leadtime for the FY 1983 MK 82 practice bombs. Previous experience indicates that actual manufacturing times for these items are similar to those reflected in the FY 1986 budget estimates. The Navy, however, is aware of the Single Manager's recent efforts to significantly reduce the amount of administrative leadtime necessary to award contracts which will ultimately reduce overall acquisition leadtimes.

QUESTION: The MK-82 does not appear to be a very complex munition. Accordingly, even a 20 month lead time seems too long. Please comment.

ANSWER: The MK-82 is not a complex munition, however, it uses a tube material which is also used as an oil-well casing. The level of domestic oil drilling activity has a direct bearing on the demand and availability of this material and, therefore, affects the production lead time for the MK-82.

At the time the FY 1986 budget was developed, the most current actual data available upon which to calculate production leadtime was from the FY 1982 procurement, which has experienced a 30 month lead time. As stated earlier, more recent data from the Single Manager indicates that shorter acquisition periods may be possible in the future due to reductions in administrative leadtimes.

AIRBORNE EXPENDABLE COUNTERMEASURES

QUESTION: Currently, there is only one source of production for RR-179 chaff and the maximum production rate is estimated at about 700 units a month. Furthermore, this item involves proprietary data and the Navy does not have a technical data package for the item.

In view of the above, what action(s) does the Navy plan to take to insure that all items are delivered before the end of the fiscal year 1986 funded delivery period?

Does the contractor have the capability to increase the monthly production rates by over five times the current maximum production level?

ANSWER: The current producer, Lundy, has confirmed that they have additional production line capacity which is in reserve status. Once they receive an order for the FY 1986 procurement, this equipment will be activated as required giving them a total production capacity of up to 6,600 rolls of chaff per month. Thus there will be no difficulty in delivering the budgeted quantity of RR-179 chaff within the funded delivery period.

BINARY CHEMICAL WEAPONS

Chemical testing to date has shown that the Bigeye bomb cannot produce the minimum VX purity within the minus 40 degree Fahrenheit to 140 degree Fahrenheit temperature range for the required timeframe.

QUESTION: Is expected kill rate the reason for the established minimum VX purity requirement? If not, what is it based on? Explain your answer?

ANSWER: The rationale for the establishment of the percentage purity of binary VX is based on the acceptable lethality of plant-manufactured VX now in the stockpile. The acceptable lethality for stockpile VX is much lower than the requirement for binary VX.

QUESTION: What is the biotoxicity rate of minimum purity binary VX and what is the associated kill rate?

ANSWER: The biotoxicity of binary VX is temperature dependent but is significantly higher than plant-manufactured VX at the high temperatures that will be encountered operationally.

QUESTION: Using the VX purity results obtained from the most successful chemical tests conducted at minus 20 degrees, minus 40 degrees, 120 degrees, 130 degrees, and 140 degrees Fahrenheit provide the following information:

1. Test number and date of test.
2. Preconditioned starting temperature.
3. The VX purity percentages and number of seconds at which the results were obtained.
4. For the above VX purity percentages, provide the biotoxicity rates and associated kill rates.

ANSWER:

BIGEYE BINARY TEST DATA
(Biological Activity in Terms of Lethality of Agent VX)

Test Number	Test Date	Preconditioned Starting Temperature (Degrees F)	Time of Sample (Seconds)	VX Agent Purity (%)	Biolgical Activity (Bio-Toxicity (%)
*		-40 F			
L-27	11/17/83	-20 F	30	(D)	(D)
L-37	01/09/85	29 F	15	(D)	(D)
LB-31	03/06/84	119 F	11	(D)	(D)
LB-33	06/14/84	130 F	8	(D)	(D)
LB-36	12/04/84	140 F	8	(D)	(D)

* No data available at this temperture

** Samples not analyzed for biological activity, but estimated to be slightly higher than VX purity achieved.

*** Samples not analyzed for biological activity but considered to demonstrate the enhanced biological activity demonstrated at [deleted] F starting temperatures.

The draft TEMP of December 13, 1984, states that the use of the FMU-140 proximity fuze and the addition of a ram air turbine as a power source for ignition of the gas generator impose increased risk level in reliability.

QUESTION: Does the Bigeye bomb meet the required 90-percent reliability at 80-percent lower confidence?

ANSWER: The draft TEMP of December 13, 1984, merely questioned whether the incorporation of the FMU-140/B fuze and the ram air turbine would impose increased risks for reliability. The testing described in the TEMP is planned to continue through October 1986. To date, reliability predictions show that Bigeye will meet the required reliability.

QUESTION: What is Bigeye's current reliability percentage with the FMU-140 fuze and ram air turbine, and what is it without them?

ANSWER: Testing has not been structured to determine the type of reliability figures requested since the fuze is an integral part of the dissemination subsystem and the ram air turbine is an integral part of the mixing subsystem. Reliability of the dissemination subsystem with the FMU-140/B fuze during the Developmental Testing-II reliability demonstration was .836 (9 successes of 9 tests) and reliability of the mixing subsystem was .817 (8 successes of 8 tests).

The draft TEMP of December 13, 1984, also indicates that the following information is unknown.

--The range of times required for dissemination of 90 percentage of carried VX agent.

--The correlation of mix/dissemination simulant with VX agent is incomplete, implying that accurate delivery of agent acceptable purity cannot be proven quantitatively.

--The effects, if any, of constantly rotating mixing machinery on the VX dissemination pattern.

QUESTION: When will the above information be known? Making the assumption that the Bigeye can produce minimum purity VX or the equivalent kill rate of minimum purity VX, will the services be able to deliver VX agent accurately over a target area which will result in minimum required kill rate? Please provide support for your answer.

ANSWER: The information is known. A recent analysis of the simulant data compared with actual VX agent has been performed. Recent dissemination tasks at the recent Dugway Proving Ground, Dugway, Utah, showed dissemination times of approximately 3 to 5 seconds. These tests showed that more than 90% of the cold dissemination simulant used was disseminated during these times. During the previous off-station mixing test series a hot kinetic simulant was used. The average dissemination time for the off-station mixing was 2.5 seconds. Comparative analysis of the two simulants with actual binary VX, shows that dissemination times of the binary VX can be expected to be on the order of 2 to 2.5 seconds due to the difference in viscosity and internal pressure. As a result of this analysis, the correlation of the dissemination patterns conducted at the Dugway Proving Ground, on the ground, confirmed that Bigeye can accurately and effectively deliver VX to any designated target. The dissemination tests have shown that there is no significant effect on dissemination from the rotating mixing subsystem.

Further the draft Bigeye TEMP of December 13, 1984, states for both the Navy and Air Force that aircraft vulnerability is a critical operational issue.

QUESTION: What primary delivery method had the Navy planned to use when agent mixing occurred on the aircraft? How much more vulnerable is the aircraft under the level/loft delivery which is required for off-station mixing?

ANSWER: Vulnerability is listed as a critical issue for the Bigeye because it is customary to look into vulnerability for every weapon system. The fact is that vulnerability is not any different for Bigeye than for any other unpowered air-to-ground weapons. The same deliveries are used with Bigeye as with other air-to-ground weapons. The loft delivery is only one of many types of deliveries which can be used with Bigeye.

There never was, nor is, any particular delivery maneuver which was or is specific to Bigeye or to which Bigeye is limited. The tactical situation will determine delivery tactics.

Recent environmental testing of 10 sulfur filled ballonets in containers disclosed damage to the sulfur bags. Further, clean-up operations of the sulfur caused a shutdown of the environmental test facility for safety reasons.

QUESTION: Were the tears in the ballonet sulfur bags a result of inadequate containers or ballonet bags which are too weak to withstand anticipated stress? Please explain the basis for your answer:

ANSWER: The tears in the ballonet sulfur bags resulted because the containers were inadequate and because the ballonet bags were too weak to withstand anticipated stress. The design of packaging which was tested with the 10 sulfur filled ballonets was inadequate in several ways to properly protect the sulfur bags and stabilize the ballonet in the container. A redesign of the packaging was commenced immediately following the testing and resulted in a design which is more effective. This redesign properly restrained the ballonets within the container, but did not prevent the bags from leaking. However, breakage was seen only on the small end bags. These end bags are heat sealed along the edges in order to make them fit in the tapered end sections of the ballonets. It has been determined that the heat sealing process was not adequately controlled in order to prevent weakening of the same area. A new design which does not rely on heat sealing will be incorporated and presents no risk to the current development schedule.

The FMU-140 proximity fuze is not included under the Bigeye budget line.

QUESTION: Under which budget line is this fuze procured?

ANSWER: The FMU-140/B fuze is included in the Bigeye line item, but has not been broken out as an individual subcomponent. The FMU-140/B fuze is also budgeted in the Rockeye and Gator budget lines as it will be utilized in these weapons as well.

QUESTION: Please provide a fuze delivery schedule for each weapon which uses this fuze that is included in your fiscal year 1986 budget.

ANSWER: There is no separate projected delivery schedule for the FMU-140/B fuzes which will be utilized on the Bigeye since the fuze is an integral part of the Bigeye procurement. FMU-140 fuzes for Bigeye will be delivered to the load, assembly, and packing facility at the same time Bigeye metal parts are delivered.

QUESTION: Does the FMU-140 fuze currently meet the minimum reliability standard? Please provide support for your answer:

ANSWER: The FMU-140/B was developed as a product improvement from the FMU-110 Proximity Fuze. As a result it was planned to be developed in three phases, with the earlier two phases using components from the FMU-110 fuze. Production representative hardware was fully tested on Phase 3 version of the FMU-140 fuze, which was delivered in the Fall 1984. Of the Phase 3 FMU-140's which have been delivered and tested, all have been successful. The initial Bigeye dissemination test used the older Phase 2 FMU-140/B fuze. Since that time, all fuzes which have been included in the testing program have been Phase 3 fuzes. Of these tests on Bigeye, 8 have been tested during the dissemination tests and 9 have been functioned from the environmental test series. Of these 17 units tested to date all have been successful. This gives a reliability point etimate for Bigeye alone for the FMU-140/B of 1.0.

QUESTION: Delivery aircraft require appropriate software packages. Which Navy/Marine Corps aircraft will be capable of delivering the Bigeye bomb?
ANSWER: The Navy plans to utilize the Bigeye weapon on the A-6E, A-4, AV-8B, and F/A-18. All of these aircraft will be capable of delivering the Bigeye weapon with the addition of appropriate software and flight clearance testing.

QUESTION: Do you have the necessary software packages for these aircraft?
ANSWER: Due to limited funding, primary effort is being expended to provide initial qualification of the A-6E aircraft, the primary attack aircraft of both Navy and Marine Corps. The A-6E has the most sophisticated software capability, therefore, no additional risk is foreseen in integrating the necessary software on any of the other aircraft listed. To date, the A-6E software code has been prepared and successfully tested. It passed simulation checks at the Weapon System Support Activity, Naval Weapons Center, China Lake, California. Software for the F/A-18, AV-8B, and A-4 are in various stages of completion. The Navy intends to complete the integration of Bigeye into the other aircraft in a timely manner, consistent with the direction of the Congress toward the production and fielding of binary chemical weapons.

QUESTION: If your answer is no, do you have all the necessary data to develop them?
ANSWER: There are no technical reasons to prohibit the integration of the Bigeye software requirements into the A-4, AV-8B, and F/A-18. Dissemination data and ballistic data which were gathered from the recent dissemination test series at Dugway Proving Ground is applicable to all aircraft.

QUESTION: Please list the data needed for software development.
ANSWER: The data needed for software development includes: (1) the specific ballistic data for Bigeye weapon flight, (2) the algorithm for determining the offset from the pattern center on the ground to the midpoint of the Bigeye dissemination line, and (3) the dissemination characteristics of the weapon.

According to the fiscal year 1986 metal parts delivery schedule, all parts will be delivered by April 1988; however, QL will not be available until about November 1988. This date is based on a 35 percent QL facility design. Also, there are many unresolved issues including the Bigeye's inability to produce minimum purity VX across the required time frames.
QUESTION: What assurance does the Navy have that QL will be available about November 1988 since the Army is projecting this date on a 35 percent QL facility design?
ANSWER: QL was produced in significant quantities prior to the 1969 time frame. There are no technical unknowns in the production of QL.

QUESTION: Since the current availability date for QL is based on a 35 percent facility design, and since the Bigeye still has technical problems, is it prudent to fund Bigeye metal parts? Please explain your answer.

ANSWER: Yes, the QL production is a mature technology. Percentage of a particular facility design has no bearing on technical capacity.

QUESTION: What are the Navy's alternatives if testing shows that Bigeye cannot meet the required minimum VX purity percentage across the required time frame?

ANSWER: The Navy feels that the Bigeye does provide a credible deterrent. Percent purity measures the percent of pure agent in the mixture and is not a measure of toxicity or operational effectiveness.

QUESTION: If the QL production facility date slips, what actions will be taken to ensure the timely production of all-up weapons?

ANSWER: As long as funding is provided, we do not anticipate a slip in the QL production date.

JET ASSISTED TAKE OFF (JATO)

QUESTION: Each MK-25 rocket motor contains a MK-188 igniter. The current production capacity for the MK-188 igniter is 125 a month. This capacity will not permit delivery of all requested MK-25 rocket motors (including those still undelivered from prior fiscal years) within the fiscal year 1986 funded delivery period.

What action(s) are being taken to increase the supply of igniters so that all MK-25 rocket motors can be delivered before the end of the fiscal year 1986 funded delivery period?

ANSWER: Two qualifed sources exist for the MK-188 Igniter which together meet the requirement of 250 igniters/month. They are listed as follows with their respective production rates:

Special Devices, Inc. Newhall, CA	500/month max.
ICI Americas, Inc. Valley Forge, PA	250/month max.

QUESTION: If a new producer for the igniters is planned, is it reasonable to expect sufficient igniter deliveries in order to complete all MK-25 rocket motor deliveries before the end of the funded delivery period?

ANSWER: No new producers are planned since the existing producers combined production rate is 750/month and is sufficient to meet the requirement.

QUESTION: If plans exist to increase the monthly production rate of the current igniter contractor, what will the new producion rate be and when will a firm production schedule be established?

ANSWER: No new plans exist to increase production rates of the igniters. The in place production schedule currently delivers sufficient quantities to meet rocket motor procurement.

QUESTION: The Navy's requirements study shows that the inventory objective for the MK-25 rocket motor will be met after the fiscal year 1986 procurement. Comparing the quantity of due-in assets in the requirements study to the corresponding quantity for previous purchase requests disclosed that the requirements study used a lower quantity. If the due-in assets are understated, the planned fiscal year 1986 procurement will result in assets exceeding the inventory objective.

Why was the quantity of due-in assets in the requirement study less than the corresponding quantity for previous purchase requests?

ANSWER: The quantities of due-in assets in the requirements study were incorrect. The FY 1982-1984 MK-25 program in the Feb 1985 budget were not revised to reflect the contract quantities.

QUESTION: Which is the correct figure? Explain why.

ANSWER: The correct quantities are as follows:

FY-1982	1980	Contract quantity
FY-1983	1304	Contract quantity
FY-1984	828	Contract quantity
FY-1985	1192	Anticipated contract June 1985
	5304	
	-633	Quantity delivered as of Sep 1984
	4671	Due In

FY-1985 quantities had to be reduced based on program reduction shown in the FY-1986 President's Budget.

GATOR

QUESTION: An advanced summary of the technical evaluation dated September 22, 1984, shows the FMU-140 fuze has a 74 percent flight test reliability. To what extent does this impact the Gator's required reliability?

ANSWER: Gator's required reliability will not be impacted as the result of corrective fixes incorporated in to the FMU-140/B fuze. The 74 percent flight test reliability was experienced in initial DT-II testing and did not reflect the redesign of the fuze. Sixteen redesigned fuzes were flight tested (8 Bigeye weapons/8 Rockeye weapons) and these fuzes all functioned properly. These tests indicated the redesigned FMU-140/B fuze will meet GATOR's required reliability.

QUESTION: What other problems must be resolved before approval for production can be obtained for this fuze?

ANSWER: None at this time. All specified DT-II has been completed and all issues have been fully addressed.

QUESTION: What assurance does the Navy have that all problems will be fully resolved in time for full production approval scheduled for September 1985?

ANSWER: The results of DT&E demonstrate that the engineering is complete, all significant design problems have been identified and solutions identified. The FMU-140/B fuze is functioning in a technically acceptable manner. The

FMU-140/B has been certified ready for operational testing and approval for full production is anticipated by September 1985.

QUESTION: The 406 Gators procured in fiscal year 1984 use the MK-339 fuze to open the dispenser. However, testing disclosed that the MK-339 is unsuitable for other than level release delivery. Eventually, these fuzes will be replaced with the FMU-140 proximity fuze which will allow level, loft, and dive deliveries. Also, Gators to be procured in fiscal years 1985 and 1986 will use the FMU-140 proximity fuze. However, all the FMU-140 fuzes in the fiscal year 1986 budget request are for retrofit of the Rockeye inventory. How will the Navy get funding for the FMU-140 fuzes required for the retrofit by ECP of the Gators procured in fiscal year 1984 and those to be procured in fiscal year 1985 and 1986 programs?

ANSWER: The FY 1986 Gator procurement includes the FMU-140 fuze, as part of the unit cost. The Navy will request funding for the FMU-140 fuzes required for the retrofit by ECP of prior Gator procurements. This ECP will change the Procurement Data Package to include the FMU-140 vice the MK-339 and retrofit all units that have been produced with the MK-339. The MK-339 will become available for inclusion in practice Rockeyes as GFM.

5-INCH GUIDED PROJECTILE

QUESTION: The Navy has requested about $104.3 million for the 5-Inch Semi-Active Laser Guided Projectiles (SALGP) program. The budget back-up states that the funding will provide 500 projectiles used on DD-963, DDG-993, and DDG-51 class ships. The 500 projectiles are scheduled for delivery between January 1988 and December 1988.

a. Please provide a list of ships from these classes that are currently scheduled for introduction through fiscal year 1989, including the individual hull numbers, initial ships operational capability dates, number of MK-45 gun mounts that will be installed on each ship and the number of SALGAP's that are needed for each vessel. Also, if the ship will be receiving the SEAFIRE Laser designator system after the initial ship operational capability date, please identify the anticipated date for SEAFIRE installation.

ANSWER: The information is provided in Table 1.

QUESTION: We understand the Navy is currently studying whether or not they believe it would be cost effective to continue with the plan to develop the second production source.

a. Who is performing the cost/benefit study?

b. When will the study be completed?

c. What factors will be used to evaluate the cost effectiveness of the second sourcing?

ANSWER: At his testimony before the House Armed Services Committee, the Assistant Secretary of the Navy (Research, Engineering and Systems) discussed a plan to compete the SALGP guidance section in FY-88. This plan is based on completing development of the Navy's "Block 1" microprocessor guidance section during FY-87. The Block 1 will substantially reduce the cost of the guidance section because it is made from commercially available components, is self calibrating, and can be procured competitively from numerous contractors. The office of the program manager for SALGP at NAVSEA will prepare the formal cost/benefit study. The study will be completed by 1 August 1985. The final cost/benefit study will compare the total cost of each option considered. The total cost will be the R&D, facilitiza-tion, production, and life cycle maintenance costs associated with the round over its life for the planned inventory objective.

TABLE 1
5-INCH SAL/GP INTRODUCTION SCHEDULE (THROUGH FY 89)

Hull No.	5-Inch/54 (MK 45/MOD 1) Gun Mounts/Ship	Completion of OVHL Date/Delivery	Estimated GP IOC (Load Out)*	Remarks
DD 992	2	9/87	12/87 (47%)	Balance Load Out 6/89
DD 991	2	9/87	2/88 "	" " " 6/89
DD 965	2	1/88	3/88 "	" " " 7/89
DD 964	2	3/88	4/88 "	" " " 9/89
DD 995	2	3/88	4/88 "	" " " 9/89
DD 966	2	4/88	5/88 "	" " " 11/89
DD 967	2	8/88	8/88 "	" " " 11/89
DDG 994	2	10/88	10/88 "	" " " 12/89
DDG 993	2	1/89	1/89 (100%)	
DD 975	2	3/89	3/89 "	
DD 970	2	4/89	4/89 "	
DD 971	2	5/89	5/89 "	
DDG 51	1	9/89	9/89 "	

*NOTE 1. Load Out - 60 rds/gun (initial) + 9 rounds/gun training allowance per year.

2. All DD 963/DDG 993 ships listed here receive SEAFIRE later (in subsequent overhauls, FY's 93 and 94); DDG 51 receives SEAFIRE during construction (FY 88).

5-Inch Guided Projectile

QUESTION: The fiscal year 1984 Defense Authorization Bill stipulates that the Navy should not expend funds to purchase the 5-Inch SALGP until the Secretary of the Navy has acquired a technical data package that can be used to solicit a second production source. The House Appropriations Committee believes the Navy should vigorously pursue a competitive procurement strategy for the SALGP.

a. Why is the Navy requesting funding for sole source procurement of 500 initial production rounds from Martin Marietta before a technical package is available for second sourcing?

b. What is the status of Navy's efforts to obtain a technical data package for second sourcing?

c. When does the Secretary of the Navy plan to advise the Congress that the data package is available and whether or not the Navy plans to proceed with the competitive procurement strategy?

d. If the Navy decides to develop the second production source how will the facilitization costs be funded? Also, please compare the expected size of the Martin Marietta and second source production facilities--i.e., expected monthly production rates and dollar value of investments in government furnished equipment.

ANSWERS: The Technical Data Package (TDP) is being reviewed by a Navy program office team. This effort will be completed by October 1985 and NAVSEA will then certify the TDP to the Secretary of the Navy as (a) "free of proprietary data", and (b) "suitable for second sourcing". This schedule should be sufficient to allow the Secretary of the Navy to notify the House Appropriations Committee before the first production contract (500 rounds) is signed in December. The Navy is requesting a limited sole source procurement of 500 rounds from Martin Marietta Corporation (MMC) in FY86 and 1200 rounds in FY87 to meet planned IOC in FY88 on DD-992 and on DDG-51 in FY89 as directed by Congress. Plans are for competitive procurement in FY88. The Navy is currently planning to develop and qualify a second production source. This will be initiated in 1986 with the first competitive procurement scheduled for 1988. It is Navy policy that the second source will capitalize all tooling and test equipment. Qualification round costs will, however, be funded out of OPN. The production buys will be structured so that initial rates at both Martin Marietta and the second source will be 100 rounds per month. Later buys will dictate that the winner of the larger share will have to expand his facility up to 200 rounds per month. There will be no government furnished equipment provided for either facility.

QUESTION: Martin Marietta received preproduction funding for SALGP in fiscal year 1984 and 1985 and the Navy is requesting funding for initial production quantities at Martin Marietta in fiscal year 1986.

a. Does the Navy expect a similar start-up period for the second production source?

b. When does the Navy estimate that the second source would be capable of competing on an equal basis with Martin Marietta (i.e. both sources capable of producing 100 projectiles per month)?

c. What percentage of the SALGP inventory objective will be purchased from Martin Marietta before the second production source is ready for competition?

ANSWER: Incorporating the "Block 1" guidance section into the SALGP will allow us to competitively procure in FY88. We feel that a minimum start up time will be required and that qualified contractors will be able to produce at the 100 round per month level or greater during FY88. At that time we will have purchased 500 rounds in FY86 and 1200 rounds in FY87 sole source from Martin Marietta Corporation. This represents 11.2% of our inventory objectives.

QUESTION: The Navy received fiscal year 1985 funding for a quantity of 59 SALGP projectiles to validate production tooling. We understand the Navy plans to award a contract for the 59 rounds in June 1985 and the first delivery is expected 9 months later (March 1986). The final round is expected to be delivered in June 1987.

a. The production schedule included with the budget back-up shows a procurement lead time of 30 months. In response to questions on the fiscal year 1985 program, the Navy stated that the 59 projectiles would not be assembled at efficient fixed rates and that the products would be subjected to testing which is extraordinary with respect to regular production procedures. Since the Navy plans to award a contract for the 59 projectiles in June 1985, and is expecting the first delivery in March 1986, it appears that procurement lead time is substantially less than 30 months. Please comment.

ANSWER: The 59 SALGP test articles under contract in FY85 will be assembled from parts and assemblies which were initially ordered during the early pre-production (Phase 1 and 2), FY83 and 84 contracts. Those parts and assemblies are from the same vendors which are intended for full production in FY86, and have the same procurement lead times. The initial procurement lead time (26-30 months) in full production is anticipated to improve somewhat as vendors and producers become more skilled. Out year procurement lead time for 5-Inch SALGP is predicated to approach 18 months.

QUESTION: What is the basis of the Navy's fiscal year 1986 cost estimate of about $196,000 for each projectile? Is it reasonable to assume that the unit cost of projectiles to be procured in fiscal year 1987 will decrease to about $84,800?

ANSWER: The affordability agreement between the Secretary of the Navy, and Martin Marietta Corporation (MMC) of November 1982 is the basis for the unit cost estimate of about $196K (FY 86 $, then year). In conjunction with that affordability agreement, the program was released to production (sole source) to MMC. The agreement specified a procurement profile beginning in FY 86 (the expected first full production year) with an inventory objective of 15,100 total rounds at an average unit cost of $44K (FY81 $, constant), and a full production rate 225 rounds/mo (3150 rds/year).

Also on that basis, it is reasonable to suppose an average unit cost of about $84.8K (FY87 $, then year) for production in FY 87. This assumption is predicated on retrieval in FY 86 of $12.6M OPN (FY85 Appropriation Act cut from tooling at MMC) in order to achieve the necessary rate.

It should be noted that the average unit cost in question is for recurring production costs per round. The associated costs for tooling and test equipment, for engineering, and for documentation are not included.

Program average unit cost, in FY86, is $208.6K ($, then year) per round, and $88.3K ($, then year) in FY87. Average unit costs drops dramatically as production advances in the out years (FY88 and later).

It should also be noted that a failure to meet the criteria for production quantities, or rate (rounds/year), will abrogate the SECNAV affordability agreement, and incur government liability under the capital investment idemification clause in the contract. Also, reducing production rate (rounds/year) always drives up costs substantially.

BUDGET LINE NUMBER 246 16-INCH GUN AMMUNITION

In fiscal year 1985, the Navy is planning to spend $5.0 million to support product improvements in 16-inch gun ammunition. The product improvements are planned in part to overcome safety problems of the current design.

QUESTION: Please describe the known safety problems of the current 16-inch gun ammunition design.
ANSWER: The existing grenade (and its fuze) in the submunitions round fail to meet safe separation criteria of MIL-STD 1316B. We are executing the product improvement program to utilize the Army's M46 grenade, currently in production.

QUESTION: What specific product improvements are planned for 16-inch gun ammunition rounds?
ANSWER: The following projects constitute the product improvement program:
(1) Mk 15 Primer - To overcome occasional misfires in using 16 inch ammunition.
(2) Alternate bag material for charges - To replace silk which is no longer domestically available.
(3) Cast Projectile Study - To determine if casting is a viable alternative to forging of projectiles.
(4) 16-inch/45 Bag Charges - To load and pack propelling charges having a lower initial velocity variation than current 16-inch/50 charges.
(5) Submunitions Projectile - This program will upgrade the submunitions projectile with the current Army M46 grenade. (This project will require FY 1986 funding).

QUESTION: When will these improvement projects be completed?
ANSWER: They will be completed as follows:
(1) Mk 15 Primer - Jun 86 (Previously reported as Oct 85, in error)
(2) Alternate Bag Material - Oct 85
(3) Cast Projectile Study - June 86
(4) 16-Inch/45 Bag Charges - Dec 85
(5) Submunitions Projectile - Oct 86

QUESTION: Are there product improvements planned for the 16-inch blind, load, and plug projectile or 16-inch full propelling charges?
ANSWER: Yes. The product improvement program addresses the 16-inch propelling charge.

QUESTION: Product improvement funds were not requested in the original fiscal year 1985 budget submission. Please explain how the Navy obtained funding for this requirement. If funds were reprogrammed from another budget line, please idenfify the source.

ANSWER: The funding for this emergent requirement was made available from various sources as a result of the Navy's rebalancing and review of priorities.

QUESTION: Based on the 24-month procurement leadtime for 16-inch/50 blind, load, and plug projectiles shown in the budget back-up, the fiscal year 1986 funded delivery period would end in September 1988. The Chief of naval Operations' Noncombat Expenditure Allocations dated August 29, 1984, provide for a total comsumption of 3,245 projectiles from fiscal year 1985 through fiscal year 1988. Considering this planned consumption and the quantity of assets on-hand and due-in from the fiscal year 1985 procurement, why is the Navy requesting funds for procurement of 700 additional projectiles in fiscal year 1986?

ANSWER: The Navy's funding request for procurement of 700 additional 16-inch/50 BL & P projectiles in FY-86 is based on a total planned expenditure of 4043 in lieu of 3245. The quantity of 4043 is based on the Non Combat Expenditure Allocation (NCEA) for FY-85 and Non Combat Expenditure Requirements (NCER) for FY-86 through FY-88. The following provides a display which shows the difference upon which the FY-86 procurements were developed:

		PLANNED EXPENDITURES			
NCEA/NCER	FY-85	FY-86	FY-87	FY-88	TOTAL
REVISED	609	1008	1008	1418	4043
PREVIOUS	609	609	609	1418	3245
				Difference	798

QUESTION: The Navy's unit cost estimates for 16-inch gun ammunition items are different from recent estimates by the Army single manager. Please explain the following differences.

Item	Navy's budget unit cost	Army single manager's unit cost	Difference
16-inch blind load and plug	$4,068.13	$1,458.83	$2,609.30
16-inch full propelling charge	$2,009.46	$ 392.88	$1,616.58

ANSWER: The Navy's unit cost estimates from the single manager were based on the supply of very little GFM (Government Furnished Material). The new unit cost estimates are now based on the following:

(a) 16-inch blind, load and plug - GFM now includes the projectile body, the high cost component.

(b) 16-inch full propelling charge - GFM now includes 16-inch/45 propellant for loading.

The new lower unit cost estimates will allow the Navy to increase the procurement quantity for 16-inch full propelling charges to 8800 vice 2055. This will improve the readiness position toward meeting the critical Program and Planning Objectives deficiencies. We recommend the savings realized from the decreased prices be retained in the line to fund the FY 1986 requirement for the product improvement of the 16-inch submunitions projectile.

BUDGET LINE NUMBER 249 OTHER SHIP GUN AMMUNITION

Based on the program cost breakdown the Navy's fiscal years 1984 and 1985 procurement programs for 25mm Target Practice Tracer cartridges total about $1.4 million and $900,000, respectively. In fiscal year 1986 the Navy is requesting about $7.3 million for these rounds, and the tentative fiscal year 1987 request is about $2.7 million.

QUESTION: The procurement lead time for this item is 20 months--therefore, the funded delivery period ends in May 1988. Based on the Chief of Naval Operations' Non-Combat Expenditure Allocations of August 29, 1984, the Navy plans to use 15,378 cartridges from the start of fiscal year 1985 through May 1988. Based on this planned consumption and considering the current inventory data shown in the budget back-up, why is the Navy requesting funding of any of these rounds in fiscal year 1986?

ANSWER: The leadtime shown in the FY86 Congressional Budget Exhibit P-20 for the 25mm Target Practice Tracer (TP-T) cartridge is an error, and should read 12 months instead of 20 months.

Our procurement programs for the 25mm (TP-T) cartridge are in support of the new Mk 88 Gun System being introduced to the Fleet. The revised installation schedule, dated March 1985, shows a total of 29 of these gun systems will be operational by the end of Fiscal Year 1986.

Using the revised installation schedule a summary of the total requirement needed each fiscal year to meet programming objectives has been updated, and is shown as follows:

FY85	FY86	FY87	FY88-92
98,000	174,000	950,000	1,485,000

QUESTION: If the Navy is able to provide adequate justification for 1.a above, wouldn't it be prudent to defer some of the request to fiscal year 1987 to maintain more level funding and production?

ANSWER: By comparing the above changes to the FY86 Congressional Cost Breakdown, deficiencies in the FY84 through FY87 procurement programs are clearly evident. The most important factor impacting this line item and others in the Other Ship Gun Ammunition Program is lack of funding available to procure the necessary quantities to meet the requirements. With these deficiencies, deferring any of the FY86 procurement would not be appropriate.

QUESTION: The Navy is requesting $1,612,000 for 1,900 60mm smoke cartridges at a unit cost of $848. The Army single manager's cost estimate for 60mm smoke cartridges as of February 8, 1985, provides for a fiscal year 1986 unit cost of $59.80. Please comment on the significant difference in unit cost estimates.

ANSWER: The Navy's unit cost estimate was based on a verbal quote from the Army for quantity 1900 cartridges. When the new single manager cost estimate of $59.80 was received, we increased the quantity to the authorized limit of 12,100 cartridges. However, the single manager has indicated even the new Navy quantity is an uneconomical buy as a stand-alone procurement. We are requesting verification of unit prices/quantities and ability to procure. We expect to have this data in July 1985. Please note that essentially all items in this budget line, not just 60mm smoke cartridges, are far below program objectives. We recommend any savings realized by decreased prices be retained in the line to help offset critical shortages.

QUESTIONS SUBMITTED BY SENATOR ANDREWS

MILITARY PROCUREMENT

QUESTION: The Air Force, before this subcommittee, indicated that a fourth leg has been added to the "cost, schedule, and performance" drivers of military procurement so that it now reads: "Cost, Schedule, Performance, and Reliability & Maintainability." The Navy also mentioned how warranties were increasing reliability and maintainability and cutting costs on weapons.

Can this subcommittee expect similar developments in the procurement of weapons to be used by both the Air Force and Navy?

ANSWER: Product Performance Agreements such as warranties can be effective tools to improve the Reliability and Maintainability (R&M) of a weapon system. Other effective tools to enhance R&M are clear requirements, management attention, source selection emphasis, growth curves, environmental stress screening, and derating to name a few. The result of successful use of these tools is higher R&M which translates to higher combat capability.

The Air Force has successfully applied warranties in the past and plans to continue to use warranties as one way to enhance R&M and to increase combat capability while lowering life cycle costs.

EFFECTIVE WARRANTY

QUESTION: Knowing that the procurement of weapons to be utilized by the Air Force and Navy sometimes involves a complex set of specifications and mission requirements, how will an effective warranty, complying with the law, be implemented on these programs?

ANSWER: In the acquisition of weapon systems, the development of a clear, concise system level performance specification is absolutely essential. This specification must embody the Air Force needs and mission requirements in a manner capable of being implemented by contractors as they develop their progressively more detailed functional and product specifications in preparation for production. The clarity of the system specification and our ability to measure, test and verify the requirements in it has always been pivotal to the success of any acquisition and forms the basis of any system warranty requirement. The requirement for weapon system warranties does not change this fact, it only makes it more important than ever.

In the acquisition of our most complex systems where it is necessary to push the state of the art to counter the known or projected threats, stating precise system level requirements capable of being measured, tested and verified becomes considerably more difficult. The contractor's corresponding ability to state, in advance and with any precision, his assurance that he will meet those requirements may also be limited. In these instances the Government will still develop a warranty based upon the system specification and the essential performance requirements contained in it. However, the cost of that warranty will reflect a sharing by the Government and Contractor of the relative risk associated with satisfying those warranty requirements.

WEAPONS WARRANTIES

QUESTION: The Air Force, before this subcommittee, indicated that a fourth leg has been added to the "cost, schedule, and performance" drivers of military procurement so that it now reads: "Cost, Schedule, Performance, and Reliability & Maintainability". The Navy also mentioned how warranties were increasing reliability and maintainability and cutting costs on weapons. Can this subcommittee expect similar developments in the procurement of weapons to be used by both the Air Force and Navy?

ANSWER: Warranties for weapons systems procured by all services have the same objective, improvement of reliability and maintainability. A well structured program, wherein the contractor is strictly liable for corrective actions associated with production quality deficiencies or design deficiencies for which he is responsible directly saves government funds. Additionally, contractor awareness that the government will enforce warranty clauses will invariably lead to improved production quality assurance with a consequent reduction in "down time" for major weapon systems. This in turn will lead to reduced operations and maintenance costs.

QUESTION: Knowing that the procurement of weapons to be utilized by the Air Force and Navy sometimes involves a complex set of specifications and mission requirements, how will an effective warranty, complying with the law, be implemented on these programs?

ANSWER: It is Navy policy that contract warranty clauses will be constructed around the three basic parameters of section 2403 in Title 10 of the United States Code; design and manufacture, defects in materials and workmanship, and essential performance requirements. Essential performance requirements will be identified in acquisition planning documents and our detailed specifications and will be specifically incorporated in our contracts.

Questions Submitted by Senator Kasten

SUBMARINE TORPEDOES

In the past the Navy has filled its submarines with highly sophisticated or so called "smart" torpedoes. It is now my understanding that you are looking to buy inexpensive and simple torpedoes like those used in World War II.

QUESTION: Isn't it true that submarines can only carry a handful of torpedoes and that few commanding officers are going to want to give up the chance to have smart weapons instead of "dumb" ones?

ANSWER: [Deleted].

QUESTION: With the advance of adversary anti-torpedo defenses, I cannot see a "dumb" weapon being as effective ~~as~~ it was in World War II. Is this true?

ANSWER: [Deleted].

QUESTIONS SUBMITTED BY SENATOR D'AMATO

COST SAVING PROCUREMENT PRACTICES

QUESTION: Would you please highlight recent improvements you have made in weapons and spare parts acquisition processes and specifically address what you are doing to inform the public of this progress?

ANSWER: The comprehensive reforms to our spares acquisition process begun in Sep 83 are essentially complete. Using the Air Force Management Analysis Group's (AFMAG) study on spares as our primary vehicle for change, we have fundamentally altered the way we do business.

We've improved up-front planning by strengthening weapon system and spares considerations in Source Selections, Business Strategy Panels, Acquisition Panels, and Program Management Directives. We are buying in larger, more economical quantities by consolidating purchases requests, expanding buy support periods and using quantity discount programs. Competition and breakout are increasing; "should cost" pricing techniques are used on all items suspected of being overpriced. Our leading edge in these reforms continues to be the 200 Competition Advocates throughout the Air Force chartered to increase competition, analyze prices, and challenge data rights.

A review of our progress indicates a net savings of $575 Million in FY84. These savings resulted from a synthesis of several factors: increased quantity buys; expanded breakout and competition; greater emphasis on price challenges; active industry cooperation; and a more favorable economy. These dollars were applied to buy additional spares to improve readiness and sustainability.

Improvements in weapons acquisition are equally impressive.

The AF has implemented a concept called "Baselining" which is intended to enhance program stability and support economic production rates on major programs. An agreement is signed by the system user, developer, supporter, and the Air Staff to establish requirements, program content, and an approved budget. Baselines have been established for the B-1B, KC-10, Ground Launch Cruise Missile, LANTIRN and other programs.

The AF is a strong supporter of the expanded use of multi-year contracting. This technique has allowed the Air Force to achieve substantial production dollar savings on major programs since FY82. In addition we have recently begun to apply the technique to spare parts and other small programs. To date, the Air Force has awarded multi-year contracts on eight major programs and four small programs for a combined $3.1 Billion in savings.

The AF is actively promoting head-on competition for systems and major components. The Alternate Fighter Engine program is an example of the success of this initiative. Savings of approximately $3 Billion are expected over the life of this program as a result of continuing competition.

Dual Sourcing is planned for the AMRAAM and the IR Maverick. In addition, dual sourcing of subcontract components is being encouraged through business strategies on our emerging systems.

But the job is far from over. While most of the paperwork is behind us, we now must ensure that these changes are fully implemented throughout our system. We are creating a new Air Force culture of cost consciousness aimed at regaining the public's confidence in our management of their tax dollars.

Towards that end, we've made a concerted effort to "spread the word" about our achievements. For example, interviews and news articles have been arranged with several regional and national media sources such as the Baltimore Sun, Business Week, Fortune, New York Times, Reader's Digest, Washington Post and the Washington Times. Also, a detailed statement outlining Air Force initiatives to improve our acquisition process was prepared by the Director of Contracting and Manufacturing Policy at Headquarters USAF. This statement was distributed to over 300 sources which included distinguished civic leaders across the country. Finally, we've involved our Major Commanders and retired four-star generals by providing them documents with specifics about the DOD/Air Force's reform effort as well as some "good news" examples to use in speeches and public remarks.

These are just a few examples and we will continue to press the public relations aspect. Only by seizing every opportunity to tell our side of the story will we solidify the substantial gains we've made.

PUBLIC INFORMATION PROGRAM

QUESTION: How do you think this public information program could be improved?

ANSWER: Our information program must serve to correct basic public misunderstanding about the way in which we acquire weapon systems, support equipment and spare parts.

For nearly three years, the public has been exposed to a flood of news about spare parts and other procurement activities. With few exceptions, general-audience media coverage of acquisition matters has but superficially dealt with our complex buying process. The specific allegations in many of these stories, which together have created wide-spread public distrust in our overall stewardship, could have been explained. But the explanation required that the media representative have a detailed understanding of the procurement system.

In the past we have often been defensively at the mercy of critics, who are quick to plant news tips about damaging stories, be they accurate, misleading, or without basis. In these circumstances, we have not always been quick to respond or as eloquent at explaining the "why" of a story as the critics have been in describing the "what."

A reactive media posture has a decided disadvantage; our comment usually rates a quote buried in an otherwise negative story. And once a story appears, accurate or not, it lives on forever in the morgue files and computer data banks of every major news organization in the country. A typical case was the 18-month-old story about a $9,600 allen wrench, which the Air Force never bought, that continues to weave its way into news columns to this day.

Ironically, there are far more acquisition success stories to be told than there are negative ones. And the dollar payoff on our successes is much more impressive. Our method of buying spare parts has changed dramatically as a result of the AFMAG initiatives, which are estimated to have saved $575 million in spares costs. Cost consciousness has taken on new meaning within Air Force buying activities. We have realized a $3.1 billion savings through multiyear procurements, and we are making significant progress in meeting or exceeding competition goals.

Clearly, the Air Force's public information program must work to make these stories part of the public record. Our program must become more active than reactive. We must educate media representatives about the procurement process and the honest, competent Air Force men and women who run it. We must strive to change the attitudes of critics whose media activities have helped foster public distrust of Air Force management. These objectives will not be easy to meet, nor will they be accomplished in a short span of time. Nevertheless, we must remain committed to them if we hope to improve credibility.

PROCUREMENT IMPROVEMENTS AND PUBLIC AWARENESS

QUESTION: Would you please highlight recent improvements you have made in weapon and spare parts acquisition processes and specifically address what you are doing to inform the public of this progress?

ANSWER: The Navy has made numerous improvements in weapons procurement.

First, as the Secretary of the Navy has mentioned in his annual posture statement, we have sought true competition, not merely the appearance of competition through source selection followed by decades of monopoly production. We have pursued a policy of establishing second sources in every appropriate program. We have raised the percentage of competition in our shipbuilding from 15.7 percent in 1980 to 84.3 percent in 1985. We have raised acquisition of all spare parts from only 15.7 percent competitive in 1981 to 28.8 percent in 1984, with a goal of 40 percent in FY 85.

Two years ago we established, at flag rank, a Competition Advocate General reporting to the Assistant Secretary of the Navy and Chief of Naval Material. He now has a network of some 300 Competition Advocates throughout the Navy's acquisition commands.

In FY 84 we awarded $14.5 billion competitively, or 37 percent of all Navy procurement dollars. That performance reflected a 54 percent increase over the total dollars we awarded competitively in FY 82. Over 50 percent of all individual contract actions executed in FY 84 were competitive.

In calendar year 1984, the Navy Office of Information made 125 news releases citing positive accomplishments. These included 29 announcements of launchings/commissionings of new ships, 32 releases dealing with new developments in hardware, seven releases concerning research and development, and announcement of 10 debarment actions against unscrupulous contractors.

To date in calendar year 1985, 85 news releases have been made dealing with nine commissionings/launchings, 12 advancements in hardware development and procurement, seven debarments and suspensions and three major accomplishments in research and development.

In addition, the Navy Office of Information makes Congressional testimony available, coordinates speeches and interviews of seniors navy officials, arranges for media visits to fleet units, and responds to media queries. It must be noted, however, that to many in the media "good news" is considered "no news". In FY 84 the Navy realized cost savings in shipbuilding programs of approximately $2.4 billion, but this fact received much less media atention than the purchase of one hammer from Gould Corporation for $435.

QUESTION: How do you think this public information program could be improved?

ANSWER: A thoroughly educated media is the best insurance for accurate and fair reporting. Within operational limits, we intend to take every opportunity to get media representatives out to the fleet where they can see first hand the effectiveness of our ships and aircraft and the skill and professionalism of our sailors. Our main problem is that editors do not allow their Pentagon Correspondents to leave the Pentagon unless they have an "excellent story opportunity" which is not defined as "good news."

Questions Submitted by Senator Sasser

SUPERIORITY OF AMRAAM

QUESTION: The AMRAAM is to replace the AIM-7 Sparrow. Specifically, how is the AMRAAM superior to the Sparrow?

ANSWER: The AMRAAM is designed to overcome limitations of the Sparrow necessary to defeat the enemy in air-to-air combat. The most critical improvement is AMRAAM's active radar. The AIM-7 has a semi-active radar seeker that requires the aircraft radar to continue to illuminate the target until missile impact. This prolonged radar illumination increases the vulnerability of our fighters. Within certain ranges, the AMRAAM's active seeker capability allows our fighters to launch an AMRAAM and then pursue other targets or escape from the combat area while the missile completes target engagement on its own. This active seeker also allows our fighters to fire multiple AMRAAMs at resolved or clustered targets on a single pass, a critical capability given that the US is significantly outnumbered by the Warsaw Pact air forces. The AMRAAM also has a data link which receives updated target coordinates from the aircraft used to alter its course to the target until the missile enters active radar range when its own radar takes over.

The AMRAAM will also have significantly improved electronic counter-countermeasures (ECCM) capabilities over the AIM-7. In addition, AMRAAM will be faster, more maneuverable, have higher lethality, have a reduced smoke motor, have better look-down-shoot-down capability, and be compatible with seven different aircraft (USAF, USN, and NATO). These capabilities coupled with the all weather, all environment, all aspect capabilities and greater reliability and supportability make the AMRAAM a vastly improved medium range air-to-air missile over the AIM-7.

FY 1986 PROCUREMENT OF AMRAAM

QUESTION: This is the first year AMRAAM has been proposed for procurement. Why have you proposed procurement in FY 86 in view of the inability to get the program costs under control?

ANSWER: The initial AMRAAM missile procurement request was in the FY 84 budget. Due to delays in full scale development and concerns with high program cost, we have not yet entered production. In January 85, the Secretary of Defense decided to further delay any production decisions until the Air Force could demonstrate that production costs were contained.

As a result, a joint Air Force/Navy/OSD effort has been underway over the last five months to identify ways to reduce AMRAAM procurement costs. These study results were briefed to Secretary Weinberger in May 1985. We believe that there are acceptable methods for significantly reducing AMRAAM costs by approximately $900 million. Since we have demonstrated that we now have program costs under control, we expect a positive decision on entering Lot I production this summer.

By using the combined $130.9 million FY 84 and 85 funds and the FY 86 production request, the Air Force will be able to fund a qualification program for the second source, an enhanced producibility effort (these two elements are cornerstones of the savings program), and advance buy/full procurement for Lots I and II to preserve the earliest possible AMRAAM/F-15 initial operational capability. Specifically, the proposed FY 86 procurement (Lot I) is a low rate initial production phase to allow qualification of the follower and to begin rate build-up by the leader. Neither the advance buy or full-go-ahead decisions will be made unless preestablished production decision criteria have been met.

We have embarked on a program which will successfully control AMRAAM costs through early competition, enhanced producibility, and management initiatives. To accomplish this we need the FY 84 and 85 appropriations as well as the FY 86 request.

DEVELOPING A SECOND SOURCE FOR AMRAAM

QUESTION: When first proposed, AMRAAM was planned to cost no more than the Sparrow. However, now it is estimated that AMRAAM will cost considerably more than the Sparrow. In just the past year, total program cost has climbed $1.7 billion to over $9 billion. Why has the Air Force been unable to control AMRAAM costs? Have you developed a second source for the AMRAAM? Do you plan to develop a second source?

ANSWER: The increase in total program cost over the past year is related to program changes such as addition of a warranty, a classified program, anticipated engineering change orders, design evolution, and program delays which caused the loss of competitively priced production options. The Department of Defense shares Congressional concerns about the AMRAAM production costs. Consequently, the Secretary of Defense directed a thorough review of cost reduction possibilities and possible alternatives to AMRAAM. This study resulted in potential production cost reductions of approximately $900 million and concluded that the AMRAAM is the lowest cost, nearest term means of meeting the critical medium range air-to-air missile requirement.

The Air Force has a leader/follower business strategy to provide a second source producer for AMRAAM. The follower contractor (Raytheon Company) has been on contract during the full scale development (FSD) program to prepare them to compete with the leader contractor (Hughes Aircraft Company) as soon as possible in production. The Air Force plans on Raytheon producing missiles in each lot of production to give them the necessary experience to effectively compete. We believe that this strategy will significantly aid in controlling production costs.

COMPETITION FROM A SECOND SOURCE

QUESTION: Does the Air Force believe that competition from a second source will bring the cost of the missile down?

ANSWER: The original analysis that led the Air Force to adopt a leader/follower business strategy showed that significant missile cost savings could be achieved through competition from a second source. Subsequent independent cost estimates have verified this original conclusion. The latest independent cost estimate completed in Dec 84 concluded that, for the total procurement program, the use of a second source should result in approximately 11 percent savings as compared to buying all missiles from a single source.

INCREASED COSTS FOR LANTIRN

QUESTION: The cost of the LANTIRN has grown rapidly. The total program cost is now projected to be $2.3 billion, which is more than double the cost justified to the Congress four years ago. Why have the costs of this new system risen so rapidly?

ANSWER: The LANTIRN program got off to an unstable start in 1979 with a significant underestimation of cost. However, since the program was restructured in 1981 and the cost capped in early 1983, the LANTIRN program has been stable and remains on track both from a cost and technical standpoint.

Shown below is a LANTIRN cost profile from Jan 1981 to Jan 1985 with associated significant events:

(FY 80 $ Millions)

	RDT&E	PRODUCTION(QTY)	TOTAL
JAN 81	242.8	370.0 (300)	612.8
JAN 82	370.9	857.0 (300)	1227.9
JAN 83	389.1	1681.7 (720)	2070.8
JAN 84	409.5	1785.6 (720)	2195.1
JAN 85	431.3	1831.9 (700)*	2263.2

* Note: Quantity was reduced to 700 pod sets in recently negotiated contract with Martin to stay within LANTIRN program funding cap of $2.31B (FY 80$).

The benchmark achievements for LANTIRN are shown below:

DATE	ACHIEVEMENTS
DEC 79	Program initiation (accelerated development/production).
SEP 80	Contract award for Navigation and Targeting pods.
SEP 81	Pod program restructure (high risk/low confidence to low risk/high confidence); six FSD pod sets for testing.
JUL 82	Pod sets increased from 300 (F-16 & A-10) to 720 (Dual Role Fighter requirements added).
FEB 83	Air Force LANTIRN program funding cap established ($2.31B, FY 80 $).
AUG 84	Restructured program - Production decision on Navigation pod in FY 85; Targeting pod production decision in FY 86 (maintains "Fly-Before-Buy" acquisition approach).

DEC 84	DT&E/IOT&E completed on Navigation pod (437 sorties flown; 40,000 miles at night under 500 ft, 450+ knots over unfamiliar terrain).
DEC 84	Targeting pod DT&E/IOT&E testing restarted with improved FLIR detectors/coolers and tracker software.
FEB 85	Navigation pod low rate initial production approved.
APR 85	Signed firm fixed-price (FFP) contract with Martin: - 700 pod sets, 29 sets of support equipment within AF LANTIRN program funding cap. - Includes a two year performance warranty. - FY 1985 contract is for two Navigation pods with annual FFP options for remaining Nav and Tgt pod quantities.

TESTING SCHEDULE FOR LANTIRN

QUESTION: It is my understanding that testing is far behind schedule. Specifically, what tests included in the original test and evaluation package are behind schedule and for what reason?

ANSWER: LANTIRN Navigation pod testing started as scheduled in July 1983 in a combined Development, Test & Evaluation (DT&E) and Initial Operational Test & Evaluation (IOT&E); this testing is now considered complete. Four hundred thirty-seven (437) sorties were flown over a 19 month period with over 40,000 miles being flown at night under 500 feet altitude. The IOT&E was successfully completed in December 1984; over fifty (50) sorties were flown over Canadian airspace to simulate a "worst case" European environment. The Navigation pod was rated satisfactory from an operational effectiveness standpoint, i.e., it meets the "User" requirements for single seat, day/night and under-the-weather, low altitude navigation and target area acquisition. From an operational suitability standpoint, improvements were identified as being needed in the reliability and maintainability areas; these improvements are planned to be demonstrated in the March-September 1985 time period.

Targeting pod testing started in October 1983 as scheduled. As of 23 May 1985, the Targeting pod subsystem had accumulated 152 sorties and 228 operating hours. The Targeting pod did not mature as fast as the Navigation Pod, and the Air Force restructured the LANTIRN program in August 1984 to accommodate a split Navigation and Targeting pod production decision. More specifically, problems were encountered in the Forward Looking Infrared (FLIR) detector/FLIR cooler reliability area, electro-mechanical interfaces in the nose section (cooling fluid leaks), laser power supply reliability, and lack of tracker tenacity (caused by noisy FLIR video signals). The Targeting pods were refurbished in the August-November 1984 time period; new Forward Looking Infrared (FLIR) detectors with coolers, improved tracker software, and improved optics were installed. Since the restart of the DT&E at Edwards AFB in December 1984, the Targeting pods have accumulated 77 sorties. The pilots have noted an improved FLIR picture and tracker performance. More specifically, the system has achieved "lock on" to the Edwards' infrared target board at 15-18 Nautical Miles (NM) and "lock on" to tactical vehicles at 3.5-4.5 NM. Over 250 LANTIRN and infrared Maverick missile correlations have also been demonstrated along with laser ranging and designation. The overall test results have been very encouraging.

In summary, Navigation pod DT&E and IOT&E testing was completed in January 1985. We anticipate that Targeting pod DT&E and IOT&E testing will be completed by January 1986 as scheduled in the August 1984 restructure. LANTIRN aircraft integration, however, is scheduled to run through FY 1989 on the F-15E and A-10 aircraft.

ATR FOR LANTIRN

QUESTION: LANTIRN requires an automatic target recognizer in order to work. However, this critical component of the system has been removed from full-scale development. Why has the ATR been removed from development?

Does the Air Force plan to procure LANTIRN without an ATR?

ANSWER: LANTIRN does not require an automatic target recognizer in order to work.

When the LANTIRN program was initiated in 1979 the automatic target recognizer (ATR) was part of the program; however, it was even then considered to be the highest risk subsystem of the LANTIRN program because of its state-of-the-art technology. After some initial design effort in 1980 and 1981, it became clear that ATR technology, especially in the software algorithm area, was too immature to be part of the LANTIRN full scale development effort. Based on this rationale, the Air Force in September 1981 placed the ATR task back into the laboratory environment until it matured. Since that time, the ATR focus has been on developing generic target recognition software for digital video systems. The Defense Science Board, in June 1983, stated that automatic target recognition devices have a future but that more basic research needs to be accomplished first.

Yes, the Air Force does plan to procure LANTIRN without an ATR. The overall value of the LANTIRN system is the synergistic capability of the Navigation pod, Targeting pod, Heads-up-display and aircraft integrated as a system. Even so, each pod can be operated and employed independently. The Navigation pod provides a low altitude high speed ingress/egress capability under the weather and at night. The Targeting pod is also of great value even without the automatic target recognizer. Its forward looking infrared (FLIR) sensor detects temperature differences with sufficient range and resolution to allow manual target acquisition and lock-on. Then another pod subsystem (Missile Boresight Correlator) provides automatic Maverick missile lock-on. This automation reduces the required workload on the pilot during the attack phase and provides weapon launches at standoff ranges. Additionally, the pod contains a laser ranger/designator. This system provides enroute course updates for more accurate navigation and gives our fighter force a self-contained laser guided bomb delivery capability. With the addition of an ATR subsystem in the future, the targeting pod capability could be further enhanced to allow for automatic vice manual target acquisition. This would further reduce the pilot workload and permit more weapon launches (three or more) on a single pass over the target area.

DEGRADED LANTIRN

QUESTION: How is the system degraded without an ATR?

ANSWER: The overall value of the LANTIRN system is the synergistic capability of the Navigation pod, Targeting pod, Heads-up-display and aircraft integrated as a system. Even so, each pod can be operated and employed independently. The Navigation pod provides a low altitude high speed ingress/egress capability under the weather and at night. The Targeting pod, initially conceived with with an Automatic Target Recognizer (ATR), is of great value even without it. Its forward looking infrared (FLIR) sensor detects temperature differences with sufficient range and resolution to allow manual target acquisition and lock-on. Then another pod subsystem (Missile Boresight Correlator) provides automatic Maverick missile lock-on. This automation reduces the required workload on the pilot during the attack phase and provides weapon launches at standoff ranges. Additionally, the pod contains a laser ranger/designator. This system provides enroute course updates for more accurate navigation and gives our fighter force a self-contained laser guided bomb delivery capability. With the addition of an ATR subsystem in the future, the targeting pod capability could be further enhanced to allow for automatic vice manual target acquisition. This would further reduce the pilot workload and permit more weapon launches (three or more) on a single pass over the target area.

ALTERNATIVES TO LANTIRN

QUESTION: Is the Air Force considering alternatives to LANTIRN?

ANSWER: The Air Force conducted extensive studies and hardware evaluations between 1979 and 1983 on A-10, A-7, and F-16 aircraft to determine what combination of equipment is needed to perform the single seat night, under-the-weather attack mission in a high threat environment. This lack of a night attack capability is considered to be the most serious operational deficiency in our Tactical Air Forces today. The key factors, which have been determined to be necessary for this mission are: (a) an infrared (FLIR) system displayed on a wide angle raster heads-up display, (b) a Terrain Following Radar (TFR) integrated with the above heads-up display; (c) a high resolution FLIR on a stabilized gimbal, with automatic tracking of targets in various terrains; (d) a laser designator for precision guidance of laser guided bombs; (e) a missile boresight correlator for automatic alignment of IR Maverick missiles before launch; and (f) the integration of all these subsystems into the cockpit. The LANTIRN system meets all of these requirements.

Considering these requirements, the Air Force has investigated numerous alternatives and has determined that no other available single system provides the required night attack capability. The LANTIRN system closes a significant operational gap in capability and enables our tactical fighter aircraft to attack targets at night, under-the-weather and in high threat environments.

TORPEDO MK 50

QUESTION: What is the status of development of the Mark 50?

ANSWER: The MK 50 torpedo project is halfway through full scale engineering development, on cost and on schedule. The first production prototype of the fleet torpedo was delivered in February and is presently operating on the hybrid simulator at Naval Ocean Systems Center, San Diego, California.

QUESTION: When do you plan to go into production of the Mark 50?

ANSWER: Low rate initial production is currently scheduled to begin in FY 87 and full production is scheduled to begin in FY 90. (It will be [deleted] before the fleet inventory of MK 50 Torpedoes exceeds [deleted].

QUESTION: The Congress previously approved multi-year procurement for the Mark 46 which the Mark 50 will replace. You are requesting approval to continue with an additional multi-year procurement of the Mark 46 in the request before us, though at a reduced rate. How will the Mark 50 be an improvement over the Mark 46 which is already in production?

ANSWER: The MK 50 torpedo will have superior performance (speed, depth, endurance, detection range and warhead lethality) characteristics necessary to be effective against [deleted] [deleted] class Soviet submarines. Each of these new submarine classes has one or more characteristics which [deleted] [deleted]. It will be a number of years before the MK 50 torpedo is available to the fleet in quantity. Meanwhile, the MK 46-5 torpedo inventory is [deleted] [deleted] necessary to combat the very large number of Soviet submarines. The MK 46-5 remains a very effective weapon against almost all of the current Soviet submarine force.

PHOENIX AIM-54C

QUESTION: What is requested for the AIM-54C PHOENIX air-to-air missile?

ANSWER: The FY 1986 PHOENIX missiles request is for 265 missiles with a Weapons Sytem Cost of $343.6M and an Advance Procurement Cost of $38.3M. The Weapons System Cost includes $92.9M for: procurement of 10 qualification missiles from a second source producer of the PHOENIX missile; procurement of long lead items and GFE for the second source producer; and engineering support for technical evaluation of the second source qualification articles.

QUESTION: How many PHOENIX missiles have been procured to date?

ANSWER: Funds have been previously appropriated for and we are under contract with Hughes to build a total of 830 improved AIM-54C PHOENIX production missiles. One hundred and thirty-eight (138) of these missiles had been delivered as of 30 April 1985.

QUESTION: What quality control problems have been identified at the plant which manufactures this system?

ANSWER: The major quality problems that were discovered during the teardown inspections were unsoldered or insufficiently soldered electrical joints, cold solder joints, poor workmanship (including in some cases reworked material), conductive and nonconductive debris entrapped within the missile (and in some cases within the conformal coating on printed wiring boards), and dented rigid coaxial cables.

Hughes is bearing the cost of reworking all previously delivered missiles to correct all quality problems. A major quality improvement program is underway at the Hughes Tuscon plant to ensure high quality is in every delivered product.

QUESTION: The Navy suspended delivery of the PHOENIX in August. What is the current status of production?

ANSWER: The Navy resumed acceptance of PHOENIX missiles in February 1985. The Navy carefully monitored Hughes for August 1984 to February 1985 to ensure that they formulated and successfully implemented a Corrective Action Plan (CAP) aimed at precluding recurrence of the quality problems discovered during missile teardown. Hughes is currently meeting their production recovery schedule and is delivering missiles of acceptable quality

QUESTION: Has the Navy decided to seek a second source for the PHOENIX?

ANSWER: Yes.

PHOENIX AIM-54C

QUESTION: What is the status of the second source competition?

ANSWER: The Navy is in Phase I of a two phase program to develop a second source producer for the PHOENIX missile. Contracts have been awarded to Raytheon and Ford Aerospace to develop separate reprocurement data packages for the PHOENIX missile to be submitted to the Navy in April 1986 for evaluation. The data packages will undergo USN evaluation, and one contractor will be selected as a second source for production of AIM-54C PHOENIX missiles.

SUBCOMMITTEE RECESS

Senator STEVENS. We have a hearing this afternoon so we will stand in recess until 2 p.m. when we have a closed session on the E6-A.

Thank you very much.

Admiral ALTWEGG. Thank you, Mr. Chairman.

[Whereupon, at 11:50 a.m., Tuesday, May 14, the subcommittee was recessed, to reconvene at 2 p.m., the same day.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 1986

TUESDAY, MAY 14, 1985

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 2 p.m., in room SD-192, Dirksen Senate Office Building, Hon. Ted Stevens (chairman) presiding.

Present: Senators Stevens, McClure, Kasten, D'Amato, Rudman, and Johnston.

GENERAL ACCOUNTING OFFICE

STATEMENT OF JOHN LANDICHO, SENIOR ASSOCIATE DIRECTOR, NATIONAL SECURITY, INTERNATIONAL AFFAIRS DIVISION, GENERAL ACCOUNTING OFFICE

ACCOMPANIED BY:

- ARTHUR SULLIVAN, PROJECT EVALUATOR, GENERAL ACCOUNTING OFFICE
- JOE HOPKINS, PHILADELPHIA REGIONAL OFFICE, GENERAL ACCOUNTING OFFICE
- BILL MEREDITH, NATIONAL SECURITY, INTERNATIONAL AFFAIRS DIVISION, GENERAL ACCOUNTING OFFICE
- BRUCE CHAFIN, NATIONAL SECURITY, INTERNATIONAL AFFAIRS DIVISION, GENERAL ACCOUNTING OFFICE

E-6A STRATEGIC COMMUNICATIONS AIRCRAFT

INTRODUCTION OF WITNESSES

Senator STEVENS. Good afternoon.

We are here to examine the Navy's $486 million request to continue development and begin production of the E-6A strategic communications aircraft. This starts a $2 billion procurement program to replace the existing fleet of EC-130 aircraft which perform the so-called TACAMO mission. The mission is to relay strategic communications to our deployed fleet of ballistic missile submarines.

I want to thank GAO for preparing a briefing on such short notice. I understand we have with us Mr. John Landicho and Arthur Sullivan, Donald Latham, and Gerald Cann.

Who are the other gentlemen with you at the table? Will you state your name for the record, please?

Mr. LANDICHO. I will introduce them with your permission. On my far right Joe Hopkins, Philadelphia Regional Office. On my immediate right, Bill Meredith of my Division, National Security and International Affairs Division, GAO.

On my immediate left is Bruce Chafin of my staff and Arthur Sullivan in charge of this particular assignment.

Senator STEVENS. We normally don't use these microphones for secret hearings. We are going to turn them off. Proceed as you wish, gentlemen.

STATUS REPORT ON E-6A PROGRAM REVIEW

Mr. LANDICHO. Thank you, Mr. Chairman.

Mr. Chairman and members, we are very pleased to be here today to give you a status report on our review of the E-6A aircraft program.

Based on you request of January 10, 1985, we examined the Navy E-6A proposal. We concentrated our efforts on the mission requirements for the Navy TACAMO aircraft as well as the cost and schedule associated with the E-6A acquisition plan.

We also compared the capability of the EC-130, the aircraft currently performing this mission, with E-6A. We expect to have a final report for review on this program by September of this year.

During the course of the review we have come upon several important issues affecting the TACAMO mission and performance requirements of alternative mission aircraft. We would like to brief you on several of these issues.

OVERVIEW OF TACAMO AIRCRAFT PROGRAM

Mr. Art Sullivan from my subdivision will give you an overview of the TACAMO aircraft program and related issues we have addressed in our review. With your permission, I will turn it over to Mr. Sullivan.

Mr. SULLIVAN. Mr. Chairman, we were asked first to look at the E-6A, the Boeing manufactured aircraft very similar to the Boeing 707 of some 30 years ago.

We also looked at the capability of the current TACAMO aircraft currently performing the mission, the Lockheed aircraft EC-130. We compared the cost of both programs, of continuing the EC-130 program as well as going ahead with the E-6A.

Furthermore, we looked at the mission itself. TACAMO is an extremely important mission in that it provides communications to deployed Trident fleet during a general nuclear war.

As we characterize the report of the President's Commission on Strategic Forces in April 1983, we may assume that our [deleted]. For that reason we viewed the TACAMO program as extremely important and looked further into the mission requirement itself.

TACAMO MISSION

I will talk first about the mission requirement and communications procedures to our missile submarine force. I might add in doing the review, we worked closely with representatives of the Joint Chiefs of Staff, Office of the Secretary of Defense, Office of the Secretary of the Navy and, of course, the Navy Project Office.

Furthermore, we also visited Boeing and Lockheed. At any time in the discussion if you wish to stop and ask questions, please do so.

To begin with, the TACAMO mission itself, it is a strategic communications network to the deployed missile submarine force. During peacetime the deployed submarines here are characterized as follows: [deleted]. They are here pictured as small green dots.

During wartime, however, it is assumed that [deleted]. TACAMO is a communications system relaying executive action messages originated perhaps from the President, which then get relayed again by Air Force airborne command posts and eventually out to the TACAMO aircraft.

Our analysis of this minimum essential emergency communications network known as MEECN, was restricted to the TACAMO involvement and communications to the subforce. As we picture it in our graphics, we lay out the network of relays and linkages and messages that may be originated from perhaps the Looking Glass, the National Executive Action Command Post, and then sent out to the airborne command posts.

We have airborne command posts for the CINC's in the Pacific and Atlantic forces. These aircraft relay messages on to TACAMO aircraft, one stationed in the Atlantic and another in the Pacific. Of course, TACAMO down links or relays that message to our Trident submarines.

MESSAGE RESPONSE BY TACAMO

A discussion then about the types of messages that TACAMO might be asked to respond to:

First, they may be characterized perhaps as a message to Trident [deleted] lastly, perhaps cease and defer launch for preparations.

We characterize on this graphic the TACAMO mission itself. We have shown the TACAMO as E-6A aircraft here, but EC-130 performs [deleted].

We should note again during peacetime the Trident boats remain in constant communications with the ground-based radio stations. This is a wartime contingency, [deleted].

MEECN NETWORK ELEMENTS

Let us take a look at the specific elements involved in this MEECN network, the emergency communications network. We were told and informed, and we have the documents to support it, that TACAMO in the Atlantic and in the Pacific during the wartime evolution [deleted] arena or area.

We discovered that due to the necessity that [deleted].

Presented along these yellow lines are the maximum ranges that this signal from the command post will transmit either westerly in the Pacific or easterly in the Atlantic. We then discovered that the EC-130, though it is capable of transiting out to a range here, this first green line, is limited then to this specific region due to a communications range potential from the airborne command post.

In summary then, the current operations of this particular network and the range and the flight area for the EC-130 aircraft is not a function of the platform; rather, it is a function of the range of this communications signal from the airborne command post to the TACAMO aircraft.

TESTING BY DEFENSE COMMUNICATIONS AGENCY

We then took a further look at the entire MEECN network, if you will, communications system, and we tried to determine what the effectiveness of the network was overall. We visited the Defense Communications Agency and we discovered that this Agency tests the effectiveness of this network every 3 months.

During the fourth quarter test for fiscal year 1984 we were instructed, and indeed we reviewed the document to support it, that in [deleted].

Likewise, in the Pacific during that same quarter in [deleted].

We looked deeper in trying to determine if this was simply an anomaly, simply a number of circumstances that would have caused the numbers [deleted] and we looked at the first quarter of 1985 and found similar results.

In the Pacific in [deleted] should be noted that this test was conducted in a benign environment. It also should be noted that the test is simply an assessment taken at a specific point in time, not very scientific.

Again, we can see there were [deleted].

TACAMO CAPABILITY

We also took a look at TACAMO's, that is the EC-130's capability. Once it received the message, how effective was it then in communicating that message to the missile submarine force?

We found it was generally effective. Indeed, tests conducted by the Johns Hopkins University Applied Physics Lab provided that the TACAMO system EC-130 with communications gear [deleted].

CURRENT EC-130 FLEET

Let us talk a bit about the current EC-130 fleet. There are two TACAMO squadrons, one in the Atlantic home-based at Patuxent River, MD, VQ-4, and another based at Barber's Point, Hawaii, VQ-3. We took a look at the mission capable rate; that is, effectiveness of each of these platforms to perform the mission today.

We discovered that the mission capable rates for both squadrons is rather good, in fact excellent, according to Navy standards a more restrictive issue, the full mission capable rate, which is quite demanding on an aircraft platform, is also quite good for both VQ-4 and VQ-3. It takes every system on the plant to work including the clocks, to make it full mission capable.

We found, too, that both squadrons operate in an acceptable way and we were rather impressed.

We should also note both the VQ-3 and VQ-4 were recipients in 1984 of the CNO Battle Award, an award given for mission excellence.

The VQ-4 Atlantic squadron is also the recipient of a CNO safety award.

Before we pass on to the [deleted] which have been noted by JCS, I would like to talk about Air Force programs that are underway to improve their capability to transmit [deleted] in this case.

We did look at the Air Force and understand they do have a program underway [deleted].

EC-130 RANGE

Senator STEVENS. What is the range figured from?

Mr. SULLIVAN. This range figure for EC-130 assumes we are going to fly what JCS calls a typical TACAMO scenario. The TACAMO aircraft flies out as far as it can, conducts two orbit missions. We go out and orbit for an hour, loiter for an hour and orbit again for another hour and we fly back.

Given that scenario, that is the maximum you can fly out and return to an acceptable home base. This is not the same as if the 130 had to fly out as far as she could in the Pacific and fly back again, it would be further than that.

Here we are asking it to perform a two-orbit maneuver. The second green arc shows that same performance maneuver for the E-6A. The E-6A is capable of a much greater range than the EC-130.

In discussing this particular operational area in the Pacific with the members of the Joint Chiefs of Staff we were informed that the black region shows the JCS preferred area of operations in the Pacific.

Currently, [deleted].

Senator RUDMAN. I wonder if the witness will tell us in both cases the distance in nautical miles from San Francisco to the yellow line, the first dark line, the second dark line, both the Atlantic and the Pacific?

Mr. SULLIVAN. From San Francisco the first green arc represents a distance of [deleted]. The next green arc is represented by a distance of [deleted]. The Pacific operational area is roughly [deleted].

[Deleted], I believe.

Does that answer it fully, sir?

Senator RUDMAN. Yes.

DISTANCES IN ATLANTIC

Mr. SULLIVAN. In the Atlantic the distance from Washington, for example, out to the TACAMO operating area in this location is roughly [deleted]. The distance to the most [deleted] of the Trident operational area in the Atlantic.

Now, of course, with the Poseidon, and I would have to measure it to be sure, but I would say it is roughly again about [deleted].

We asked then, according to JCS, why it was essential that the Tridents operate west of the area they are operating now? Forty percent of that region is still a rather significant area.

Apparently, the reason is to allow a Trident boat to [deleted].

We must recall what the scenario assumes. The scenario first assumes [deleted].

Second, that we are subject to a [deleted] operating in this area which [deleted] and last, we assume that the E-6A can receive a message out to this point. We know whatever platform is used for the TACAMO mission, [deleted].

POTENTIAL FOR RELAY TRANSMISSION

Senator **Stevens**. There is no potential for relays of transmission?

Mr. **Sullivan**. Directly to the submarine?

Senator **Stevens**. To the TACAMO? There is no relay ability if that signal cannot be relayed?

Mr. **Sullivan**. Not directly to the submarine, sir.

Senator **Stevens**. I mean to either the EC-130 or E-6A?

Mr. **Sullivan**. Yes, sir, it can. That signal currently, the airborne command post of the Pacific operating in this region and airborne command post in the Atlantic operating in this region, their duty is to relay that message up and over to the TACAMO aircraft.

Senator **Stevens**. They don't use any ground relay points?

Up my way we operate towers [deleted] from where the operator is [deleted]. There is [deleted] capability to relay that now?

Mr. **Sullivan**. Not given the assumption in play. The assumption in play is that we are under nuclear attack, that the impact of nuclear explosions on both the east and west coasts are limiting the effectiveness of the ground-based radio stations and their ability to relay messages to TACAMO aircraft.

Second, because we are under attack, we assume that [deleted]. In the latest discussion I had with the Navy, we discussed what was the worst impact on the system.

Was it [deleted] or nuclear explosion? It depends where you are operating. If you are operating further out to sea, it would be [deleted]. Given where TACAMO operates now, one of the major impacts is [deleted].

Senator **Stevens**. We have to assume that the airborne relay platform is in the air?

Mr. **Sullivan**. That is right.

Senator **Stevens**. And the President's looking glass is functioning?

Mr. **Sullivan**. Yes, sir.

MILSTAR

Senator **Stevens**. It seems to me there ought to be some capability to extend that yellow line.

Mr. **Sullivan**. There are a number of systems coming up in the future. One of the most promising systems will be MILSTAR. That is a high altitude geosynchronous satellite that hopefully will be along [deleted]. That will allow the TACAMO aircraft, whichever platform it is, [deleted], get a message directly from the [deleted].

Whether or not the Joint Chiefs or the Department of Defense will allow their aircraft to operate with [deleted] is a decision left to that organization.

Senator **Rudman**. That assumes that the MILSTAR survives?

Mr. **Sullivan**. Absolutely.

Senator **Rudman**. Our one nuclear war which is maybe not even an assumption you can make. I think that has to be injected into this.

Mr. SULLIVAN. You are exactly right.

REDUNDANT CIRCUITS

Senator STEVENS. It seems to me the major [deleted]. That is that link.

Did you find any evidence of any search for ability to provide a redundancy for that communications link [deleted] right now?

Mr. SULLIVAN. Yes, sir. The Air Force has several programs ongoing in an attempt to improve and provide redundant circuits. They will be in place hopefully in [deleted] or slightly thereafter.

There are programs in place and ongoing that hopefully will allow TACAMO to operate further out to sea.

Mr. LATHAM. Mr. Chairman, I will address it later, but if there were nuclear war, we would launch emergency rocket communications for those. They are Minuteman missiles with radios in them that would have prerecorded messages, carrying action messages.

Those would be launched [deleted].

In addition to the links he has been talking about there is [deleted].

The second thing we can do is move these orbits of relay aircraft under wartime conditions such as we can improve the connectivity.

Third, is the MILSTAR which will be here [deleted].

As he mentioned, there are other programs to include the communications link onboard the airborne command post and the TACAMO to receive the messages more efficiently. It is not quite as bad as it looks.

Senator JOHNSTON. Would those Minutemen be put in orbit?

Mr. SULLIVAN. [Deleted.]

Senator STEVENS. I don't know why you don't put some kind of redundancy in ground remote rebroadcast capability and have all kinds of redundancy in the Pacific Island and Aleutian Islands [deleted].

Mr. SULLIVAN. We should also note that in addition to Air Force programs that would hope to improve this linkage between the TACAMO aircraft and airborne command post, there are also ongoing programs in the Navy to seek to improve the transmission range of the signal from TACAMO.

Our hope then is that given we are operating within this constraint, that once these other programs come on line, that we may be able to extend our Trident operational area in the Pacific from currently [deleted].

TACAMO AIRCRAFT

Senator STEVENS. What is the effect on the triad from the point of view of its location having been indicated by the circling TACAMO aircraft?

Mr. SULLIVAN. Trident doesn't have to operate in the immediate area of the orbiting TACAMO aircraft. The TACAMO aircraft orbiting in this region right here, the Trident can still receive that signal as long as it is operating anywhere in this region.

So, it does not have to be in close proximity to [deleted] the TACAMO aircraft. That was another version we looked at and fortunately it is not a tipoff to the location of the Trident.

Obviously, however, it is a tipoff to the location of the TACAMO aircraft.

Again, wrapping this up, sir, we would like to relate again that the current EC-130 is not the weak link in this strategic communications network. What is driving the requirement for the E-6A is [deleted].

I should like to turn to a discussion of the E-6A and compare it to the current EC-130.

The E-6A is, there is no doubt, a very capable platform. It is a variant of the Boeing 707 produced more than 30 years ago and currently in service in the Air Force, currently being produced by Boeing. They are now producing an AWACS version for the Saudis that has many of the same components as the E-6A is designed to accept.

As we can see, its range is quite a bit more. The mission endurance is roughly [deleted]. It does have a lot of growth potential and service life.

Boeing also provides that it will be a far more reliable aircraft, given the newness of many of the features they are adding to it.

There were, however, many deficiencies that were associated with the EC-130 that resulted in the E-6A requirement. Some of the deficiencies mentioned by the OSD, the Joint Chiefs of Staff and Navy, relate principally to the range of the aircraft, but there were other concerns.

Other concerns relate to the EMP hardening of the aircraft, habitability improvements which were desirable and of the service life of the aircraft.

In response to these cited deficiencies, Lockheed has proposed a TACAMO improvement program that will address many of the deficiencies that have been noted by OSD.

Referring to this particular graphic here, we note in February of this year Lockheed proposed to the Secretary of the Navy a $285 million program to do the following:

Provide center wing replacement on 13 aircraft.

Inflight refueling on a fleet of 20. New engines.

EMP HARDENING

We know that an EMP hardening program is ongoing today in the Navy for EC-130.

Also it provides survivability improvements.

In addition, Lockheed proposed it is now willing to extend the EC-130 service life to 38,000 hours. This is roughly a 13,000-hour increase. This represents a 10-year add on to the life of the EC-130 TACAMO platform.

We then reviewed the cost of the E-6A versus EC-130. Our analysis looked at the EC-130 in terms of its operations today. We didn't envision if we were to continue with this option that we would provide a mission that is excessive to what the EC-130 is doing today, given the limitations in the strategic communications network.

Also, in our cost analysis for the EC-130 we included the TACAMO improvement program. It is a rather inexpensive improvement mod for a fleet of 20 aircraft. Comparing that to the fleet of E-6A's, we saw the numbers that are cited.

In general, there is a $2 billion difference between the E-6A program and EC-130 over 2 or 3 years.

In further looking at the program and the cost acquisition schedule for the E-6A, we looked at the Navy plan for acquiring the aircraft versus the delivery plan that Boeing had briefed to me as well as to the staff.

In looking at this particular graphic, we see all aircraft will be funded before the first aircraft is flown. We provided an acquisition plan for the 15 aircraft with the first aircraft procured under R&D funds.

As we know, aircraft 2 and 3 are the first two that will be procured with APN funds proposed in this fiscal year 1986 budget for $400 million.

We looked further to find out whether or not this sort of concurrency was worthwhile. Concurrent programs exist, they can save money. Oftentimes they can take on more risk than the American taxpayers are willing to bear.

In this particular program we found three issues that may have low, moderate or high risk.

E-6A COMMUNICATIONS

The first risk was associated with the integration of this TACAMO communications equipment on the E-6A. We should note this acquisition plan is for the E-6A platforms alone. It does not include any communications gear.

The plan is to remove the communications equipment in the EC-130's and plug them into the E-6A. That integration, that restacking of avionics, is an engineering challenge and may have some risk associated with the program itself.

A second issue that we took a look at was the potential for electromagnetic interference associated with the internal noise of this platform and what impact it may have on the avionics equipment.

We tested that theory and the Navy contended that it was a low risk.

Another risk we examined was the ability of this aircraft itself to conduct this orbit maneuver. We found that the Navy had conducted sufficient tests in their opinion to, again, make that a very low risk issue.

Orbit maneuver again is the ability of the craft to [deleted].

With those three issues in mind, we then concluded that there is some amount of risk associated with this program.

We have asked the Navy to work to assess whether or not this concurrency is justified.

We also looked then at the service life that would be available on the remaining EC-130's, once the communications gear had been removed and put into the E-6A.

What our graphic presents here are all 20 EC-130's. We should note that the last two have not been delivered yet. They will be delivered later this year. We present there that the remaining life on these platforms, given that you accept the Lockheed proposal that each aircraft will last for 38,000 hours, ranges from a low of 34 percent to a high of 81 percent.

WARRANTIES

Senator STEVENS. Is that a valid assumption that they are willing to warrant the new ones, but are they willing to put back together and warranty the old ones for an additional 38,000 hours?

Mr. SULLIVAN. Yes, they are. In our discussion with Lockheed yesterday to find additional evidence on this issue, they said they were.

Senator STEVENS. At what cost?

Mr. SULLIVAN. Mr. Chafin.

Mr. CHAFIN. It is not an additional 38,000. It is a total of 38,000.

Mr. SULLIVAN. Right. A maximum of 38,000.

The black dots represent in our particular graphic here—let us use the assumption which is the Navy assumption that these aircraft will only last 25,000 hours. The black dot represents where those EC-130's then would die off if you used that very conservative assumption. We tried to cover ourselves on both issues.

What we did see, however, is that certainly for the last 10 EC-130's, the newest aircraft, there is still quite a lot of service life left on these platforms.

We believe the different service lives provide the luxury of different options to consider as you discover new ways of accommodating the TACAMO mission.

GAO-INVESTIGATED OPTIONS

The options that GAO investigated then were the options of proceeding with the Navy's E-6A program, that is to replace the entire fleet of 20 EC-130's with 15 E-6A's, and the cost associated with that program, roughly $2.5 billion, is shown.

Jumping to option 3 then, we looked at the consideration for retaining the EC-130 fleet with the Lockheed improvement program and discovered that that option would be roughly $2.5 billion.

Option 2, which is provided, given the luxury of the additional service life left on the newer EC-130's, was to acquire the Boeing E-6A, [deleted].

The cost for that option is $4 billion. Again, this is operating over a 20-year life.

We then looked at the advantages and disadvantages of each option and discovered that in option 1 your primary advantage is that you are able to accommodate [deleted].

Option 2 also provides that that specific targeting issue will be met and that the mission will continue as it does which is in a satisfactory manner in the Atlantic.

Option 3 continue to use the EC-130's with an improvement program. That option provides that EC-130's will continue to operate within the range spectrum they do now. Given that option then, [deleted].

We also then looked at a variation of option 2. That variation suggests that due to the severe concurrency in the program that the Navy and Secretary of Defense might want to consider deferring the acquisition appropriations for this particular program.

This deferral then, deferring the issue to fiscal year 1988, would then allow E-6A to be delivered in time to accommodate what we now call the scheduled communications enhancement to this network.

Our reasoning is why acquire E-6A to continue to be confined to this area of operations? Certainly this aircraft is capable of much more.

This concludes our formal briefing on this review. We hope to have a report by the end of the summer.

COMMUNICATION OPTIONS

Senator STEVENS. Put up that first chart again for the benefit of the people who weren't here, the one that shows the number of attempts to communicate and their success.

Mr. SULLIVAN. This is specifically communications attempts from the airborne command post by the commander in chief of the Pacific forces and commander in chief of the Atlantic forces to TACAMO.

Senator STEVENS. Why should we fund the program at all or any part of it with that kind of result? Why don't we send them back to the drawing board and get us one that works?

Mr. SULLIVAN. It was option 4. Option 4 was to do nothing.

Senator STEVENS. I thought your option 4 was not to respond right now. That apparently has been one of the House committee's point of view. This is a very intricate system to be used only in the event of ultimate catastrophe and it doesn't work.

Mr. SULLIVAN. TACAMO represents one of the strongest links in this communication network.

Senator STEVENS. I am not critical of TACAMO. I am critical of attempts to communicate with TACAMO.

Mr. SULLIVAN. The conclusion from the Defense Agency is that the Air Force needed to improve the equipment for communicating with the TACAMO aircraft.

The Air Force has initiated a program to improve its capability.

LOOKING GLASS AND TACAMO COMMUNICATIONS

Senator RUDMAN. Is there anyone in this room who can tell us the nature of the communications devices that are used between Looking Glass and TACAMO?

Mr. LATHAM. First of all, I think and I will get you the data on this, usually the [deleted] and usually it is the line of site test that they are reporting here.

Mr. SULLIVAN. This is MEECN VLF.

Mr. LATHAM. Where is UHF?

Mr. SULLIVAN. The UHF response was considered not appropriate in this case due to electromagnetic impulse.

Senator RUDMAN. That is why I am asking the question.

Mr. LATHAM. This is a very distorted picture, that is my point. Let me go over the way you can inject today in TACAMO aircraft.

[Deleted.]

We sent people out, got the crews trained up much better and the results are dramatically different.

So, some of this could be methodology, not just connectivity from a so-called weak signal.

The sixth is far better than what this chart shows.

Senator STEVENS. We are here to listen to GAO.

Mr. LATHAM. I am from OSD. I hope you will listen to us.

Senator STEVENS. We will, too.

I think the questions ought to be directed to GAO.

Senator RUDMAN. I apologize, Mr. Chairman. It is not Mr. Latham's fault. I asked him to respond and he volunteered.

Under present standard operating procedure of communicating between Looking Glass and TACAMO in either area, Atlantic or Pacific, what is the first choice of communication? What is their first methodlogy?

I don't know if they carry UHF frequency. What is the preferred guaranteed number one method? Is the urgent message, the plane takes off from [deleted] and they say send a message to the fleet, what do they use?

Mr. SULLIVAN. Typically UHF.

EMP PROGRAM SWITCH TO VLF

Senator RUDMAN. Is there an EMP Program switching to VLF?

Mr. SULLIVAN. Yes.

Senator RUDMAN. Do they have UHF?

Mr. SULLIVAN. Yes.

Senator RUDMAN. Does TACAMO have UHF?

Mr. SULLIVAN. Yes.

Senator RUDMAN. Do we have any tests available other than VLF? Have any tests been run independently that can be furnished the committee for the record indicating the success rate with HF or UHF?

Mr. SULLIVAN. They do. [Deleted.]

What we looked at, sir, we looked at the scenario for utilizing the TACAMO aircraft. In that particular scenario [deleted].

Senator RUDMAN. I understand that. I am not criticizing your methodology. I am only trying to get the facts.

That graphic is wholly representative of VLF communications?

Mr. SULLIVAN. It is.

EMP

Senator RUDMAN. Essentially what you are doing is making assumptions that EMP exists because the Hawaiian Islands and the west coast of the United States would be obvious targets. There are other ways of creating EMP. We would assume an adversary would do that early on in the case of a first strike. Technically, can you tell us that either [deleted] or [deleted] will work?

Mr. SULLIVAN. We discussed that issue with the representatives of the Joint Chiefs. We were informed [deleted] would be the communications frequency of choice under that particular scenario.

Senator RUDMAN. [Deleted.]

Mr. SULLIVAN. [Deleted.] We also note this particular test was taken in a completely benign environment. In this particular scenario we have a [deleted].

MILSTAR COMMUNICATIONS CONSOLE

Senator RUDMAN. What is the communications console on MIL STAR?

Mr. SULLIVAN. It is [deleted] to TACAMO and then TACAMO communicates VHF to the submarine.

Senator RUDMAN. How does it go from Looking Glass to MIL STAR?

Mr. LATHAM. [Deleted.]

Senator RUDMAN. It is [deleted].

Mr. LATHAM. [Deleted.]

Senator RUDMAN. That is [deleted].

Mr. SULLIVAN. It is, sir.

Senator RUDMAN. Doesn't this chart prove and those charts prove that we ought to buy the E-6A?

Let me tell you why.

Mr. SULLIVAN. Go ahead.

Senator RUDMAN. Taking your assumptions, and I am sure they are accurate, that we are having this problem of [deleted] and let us just assume, which I will have to assume, everybody tells me that will be solved in 2 years—it will take 10.

Isn't it better to have an aircraft with all of the speed and the endurance of the E-6A that hovers essentially off the coast, picks up a solid signal and then is able to raise at high speed to the western Pacific to give that all importent message to the Trident?

Isn't that an advantage? No. 1, can't only the EC-130 get there, but the question is how fast can it get there?

Speed at that point in time of national emergency could be critical. Isn't it critical that we have an aircraft that moves out 550 or 600 miles an hour to get to that position to send that message quickly, isn't that the key to the whole argument if we assume we don't solve the [deleted].

Mr. SULLIVAN. The E-6A is a far more capable platform than the EC-130. It can fly further, faster, do many things better than the EC-130.

We learned in our discussion with the Joint Chiefs the fact that TACAMO aircraft [deleted]. That is not only to communicate today's message, but assure they can communicate tomorrow, understanding that the Trident fleet will [deleted] given the need for the aircraft to stay in this region to receive the message and again to continue to operate in that area so that it won't run beyond the yellowline and miss something else that comes out at it.

Senator RUDMAN. I have been up in a mission with them [deleted].

Mr. Chairman, I simply want to say this seems to me essentially whatever the Joint Chiefs want to tell us today. They can meet tomorrow morning and decide [deleted].

I don't know why I am doing this. Frankly, I think all the arguments prove to me we ought to have the most capable aircraft we have.

TRIDENT COSTS

How many billions are we spending on Trident? I forget how many billions we are spending.

I would like to point out that the record of the Navy and Secretary of Defense and the whole bunch is abysmal on this. I won't bore this committee with the quotes, but I will give you quotes starting at the top saying it is the most important thing in the world and the last one, maybe we don't really need it.

I have never seen so much ambivalence on a major program in my life. I think it is important. I think with all the money we have spent on Trident submarines, the last best hope of this country in the event we are attacked, I don't think we ought to save money.

Senator STEVENS. How likely is the EC-6A to stay around for communications link tomorrow when it [deleted] today under the circumstances you have described? We are totally affected by [deleted] on the west coast. Where is it going to be refueled?

Senator RUDMAN. It wouldn't have to refuel. It could go out, send a message, and crash.

Senator STEVENS. Senator McClure.

Senator MCCLURE. I have no questions.

Senator STEVENS. Senator Johnston.

Senator JOHNSTON. Thank you, Mr. Chairman.

IMPORTANCE OF SPEED IN AIRCRAFT

Why is speed an important capability for these aircraft?

Mr. SULLIVAN. Operating under the scenario we are looking at today, sir, it is not. Currently JCS has directed during peacetime operations—we should note, that there are TACAMO aircraft airborne 24 hours a day—they are directed to fly a pattern such that every plane is within [deleted] of this specific region.

I guess if a plane could fly faster, it could fly further than this area.

Senator JOHNSTON. They could do a tag team sort of thing so they don't get off station.

Isn't the same thing true with range?

Mr. SULLIVAN. Absolutely. Now JCS has directed TACAMO operate here which is far within the range of the EC-130, range obviously is not an issue.

Senator JOHNSTON. You know, you look at the E-6A, you say sure it is faster and goes further, but does not stay up there very much longer as I recall the figures. The communications package you can certainly put in either one.

So, what are we getting it for?

Mr. SULLIVAN. In the E-6A you are getting an aircraft that can accommodate future enhancements to this network. It is not an aircraft today that can do more than an EC-130 can within this particular network limitation.

Given the enhancement that Secretary Latham discussed, it is the aircraft that will be able to accommodate the systems.

Senator JOHNSTON. When you extend the line out further?

Mr. SULLIVAN. Yes, sir, when you go beyond EC-130 operational range.

Senator JOHNSTON. When you do that, wouldn't you also do the tag team thing with the airplanes?

You have somebody up there cruising all the time like Looking Glass.

Mr. SULLIVAN. Yes, they do.

Senator JOHNSTON. So, range and speed again, what is the difference?

Mr. SULLIVAN. It is not a player in today's scenario at all.

Senator JOHNSTON. What about tomorrow's scenario?

Mr. SULLIVAN. In tomorrow's scenario it could be an issue perhaps if aircraft coming on station--the aircraft don't exactly replace each other at the point they are in the ocean.

As one makes his way in toward the coast, another takes off. The overlap can be an hour or two, but it is not point to point in the middle of the ocean.

Senator JOHNSTON. One does not leave the communications area until the other one gets within the communications area?

Mr. SULLIVAN. That is right.

Senator JOHNSTON. You have enough airplanes to get them exactly where you want them? You don't have to compromise on that issue as far as speed?

Mr. SULLIVAN. That is right, sir.

Senator JOHNSTON. This is very elemental, but that long wire, is there more risk of getting that broken?

Mr. SULLIVAN. In my discussions with the Q-4 in Patuxent River, MD, they do experience from time to time wire breakages predominantly from icing up with the [deleted].

Senator JOHNSTON. Does speed have anything to do with it?

Mr. SULLIVAN. No; it is more a function of the wire itself, tensile strength.

Senator JOHNSTON. How about the turning radius or speed?

Mr. SULLIVAN. That wire is in a stall configuration when it is hanging. It should not be a factor on it. The platform itself is actually making the wire stall in the middle.

Senator JOHNSTON. Thank you.

LOOKING GLASS-TACAMO COMMUNICATIONS

Senator STEVENS. Why can't the Looking Glass communicate directly with the TACAMO?

Mr. SULLIVAN. I should point out that the Looking Glass aircraft, knee cap as it might otherwise be called, [deleted].

However, given that Looking Glass has many missions [deleted].

Senator STEVENS. Have there been attempts?

Mr. SULLIVAN. There have been [deleted].

Senator MCCLURE. You talk about what happens here under the particular scenario you describe.

Is there likelihood in the intial phases of engagement you don't have extensive EMP?

What about comparison to the other two aircraft for that particular mission during the first 15 or 20 minutes?

Mr. SULLIVAN. Not just as a GAO person, but as an American citizen, it is my hope that JCS has targeted that [deleted] of the MEECN system work as well as the TACAMO platform to communicate with the subforce.

If the [deleted] TACAMO then could communicate with the entire Pacific.

Senator McCLURE. Let me talk about [deleted] being in effect, but the EMP not being in effect.

Mr. SULLIVAN. They would more than likely look for alternative means to communicate.

First, I would like to see UHF used more in that particular scenario.

Senator McCLURE. What is comparison between the two aircraft in the event [deleted] is working and you have not had a nuclear explosion?

Mr. SULLIVAN. Then it is the range issue.

Senator McCLURE. Range would be important in that timeframe under those circumstances?

Mr. SULLIVAN. Yes, sir.

Senator McCLURE. And speed would be important, too?

Mr. SULLIVAN. Yes, sir. Again, we have to rely on the Joint Chiefs directing a specific orbit area for the TACAMO aircraft. That would be predetermined and prearranged to make sure it would remain in there as a viable, continuing element in this communication system. You would not want it flying off in different directions.

MILSTAR

Senator STEVENS. Will you put up that last chart? I remember one had a MILSTAR reference on it.

Mr. SULLIVAN. MILSTAR is a system that is not part of the E-6A design baseline. We hope it will be later. It is our hope that MIL STAR is all that it proposes to be.

We know E-6A has plenty of growth potential to accept the MIL STAR configuration now.

We looked closely at EC-130 to see if there was any way we could accommodate it on there. We have to say it truly is not advisable. If you put MILSTAR on this right now, you would have to accommodate the added weight by offloading fuel.

Senator STEVENS. That is right. There is a communications enhancement currently being funded and underway at the Naval Air Development Center. The most conservative analysis of that communications enhancement is that we will be able to save up to 2,000 pounds on the weight of the communications gear.

Given that savings occurs, we can then accommodate a MIL STAR receiver on the EC-130 and not have to offload fuel.

EC-130 REFUELING

Senator JOHNSTON. Can you refuel the EC-130?

Mr. SULLIVAN. There are EC-130's that have refueling capabilities. The TACAMO improvement program that Lockheed proposes would also put a refueling port up here. The refueling port on this aircraft and the refueling port proposed on the Lockheed improvement program are Air Force refueling ports.

The Navy uses drogue refueling. These are boom refueling. We would have to rely on Air Force refuelers to refuel the Navy aircraft.

Senator STEVENS. Any other questions, gentlemen?

Senator RUDMAN. I would like to thank Mr. Sullivan. It is a very interesting presentation. He has given us all the facts.

Senator STEVENS. Yes. We do appreciate it and we appreciate the timeframe in which you did this. All the presentations to the subcommittee have been excellent and I think delivered without real controversy. The options are valid options.

Thank you, gentlemen.

[The prepared statement of Donald C. Latham follows:]

PREPARED STATEMENT OF DONALD C. LATHAM, ASSISTANT SECRETARY OF DEFENSE (COMMAND, CONTROL, COMMUNICATIONS, AND INTELLIGENCE)

Mr. Chairman and Members of the Committee. It is my privilege to appear before you today to discuss the TACAMO replacement aircraft, the E-6A, an indispensable component of our Strategic Command, Control and Communications in support of the most survivable leg of our strategic forces. The capabilities of the E-6A provide the necessary connectivity to our ballistic missile submarine force so that it may be effectively utilized as the most surviving and enduring component of the strategic offensive forces. The TACAMO will also provide ensured connectivity to our other submarines, and in particular, the cruise missile equipped boats.

The deployment of the Trident weapon system has greatly expanded communications coverage requirements which directly impact the required TACAMO performance and operation. The E-6A, with greater range, payload, speed and endurance, best satisfies these JCS validated requirements. This greatly improved airframe will replace the inadequate EC-130 aircraft to significantly enhance the survivability, endurance, and performance of the vital TACAMO mission. We are currently on contract for the development phase of this E-6A program and this effort will continue in FY 1986. We have submitted, per Congressional request, the TACAMO Alternatives Study. The report documents conclusions reached after two years of additional analysis that the E-6A aircraft remains the strongly preferred alternative to support the assured connectivity to submarine force.

Principal to this conclusion is the distance that must be flown to reach areas that support connectivity requirements and the subsequent effect this has on the ability to employ a survivable [deleted] to achieve survivability and endurance, can only be accomplished if the bases are located [deleted]. The distance from the bases to a point where the TACAMO must fly in order to provide the required connectivity is used to size the required number of TACAMO. To support the day-to-day mission requires either [deleted] E-6As or [deleted] EC-130s. However, significant difference in aircraft capability exists in terms of flexibility. Flexibility differences include the ability or inability to maximize on station time, compensate for communications performance, increased jamming threat, locate suitable weather for orbiting, maximize on station time of surviving assets, and time for the backup to reach the orbit area. For example—

The greater range, speed, and surge capability as well as the higher reliability of the E-6A provides mission flexibility as follows:

—[Deleted.]

—It enhances Continuous Airborne operations:

—[Deleted.]

—In a wartime scenario, it maximizes on station time of the limited numbers of surviving assets by reducing transit times.

—It allows the E-6A to compensate for changes in achievable communications performance or changes in the downlink jamming threat by operating at the limit of the injection link.

—Facilitates locating weather suitable for orbiting.

—[Deleted.]

It is significant that the costs of [deleted] E-6As versus [deleted] EC-130s are comparable. In addition, the cost to provide ensured connectivity to the SSBN with the TACAMO represents less than [deleted] percent of the cost of the Trident force.

In conclusion, the TACAMO E-6A, is a major element of the Strategic Modernization Program which the President directed. It is the survivable connectivity link for the sea-based leg of our nuclear TRIAD. [Deleted.] The E-6A program should be [deleted].

DEPARTMENT OF DEFENSE

ASSISTANT SECRETARY OF DEFENSE (C3I)

STATEMENT OF DONALD C. LATHAM, ASSISTANT SECRETARY OF DEFENSE (C3I)

ACCOMPANIED BY:

GERALD CANN, PRINCIPAL DEPUTY ASSISTANT SECRETARY OF THE NAVY (RESEARCH, ENGINEERING AND SYSTEMS)

VICE ADM. ROBERT E. KIRKSEY, U.S. NAVY, DIRECTOR OF COMMAND AND CONTROL, DEPARTMENT OF THE NAVY

AIRCRAFT RANGE AND SPEED

Mr. LATHAM. Let me run through a few viewgraphs in a hurry.

[Chart 1 deleted.]

Before Senator Johnston leaves, let me answer that question differently about range and speed. I will tell you why it makes a difference.

We don't know when war is going to start. I would like to have aircraft that have flexibility. I will show you range and speed makes a big difference. I will talk about basing modes and things of that nature.

[Chart 2 deleted.]

Let me try to set the context of this with what we do to communicate with submarines today. I don't know if you can see this small print.

First of all, during peacetime we relay messages day to day to the submarines using fixed VLF, LF, HF, ground-based stations. There are some deficiencies, old transmitters, and so on. There is an improvement program to fix these and in addition, we are adding ELF, as you know, extremely low frequency, so that we can communicate with the submarines with that message medium also.

The next thing is immediately at the outbreak of hostilities and without any prior warning we must maintain connectivity from the NCA for SIOP execution or termination. That requirement exists today and the current system we use to assure connectivity is TACAMO EC-130.

What are the improvements in the new TACAMO we are talking about, MILSTAR for improved injection and ELF. I will come back to that point.

Senator STEVENS. What is the blue stuff?

Mr. LATHAM. I faded all the other words out so that you don't become distracted by too many words but concentrate on this point.

Senator RUDMAN. I think you ought to supply us with binoculars.

Mr. LATHAM. We want to always be able to alert the submarines. Today there are certain of the [deleted].

By adding ELF, which we are doing, we will have all submarines in communications with the shore at all times and as a result, if ELF ever disappears for any reason, you have immediately the capability to have them come up and come to another communications medium.

This gives you a [deleted].

By the way, since we are putting [deleted].

The next thing is throughout the period of hostilities you want the submarine force to [deleted] and so on. This is the endurance issue.

Today the only current system we have for that purpose is the EC-130. The issues are thus survivability and endurance of the EC-130. What are we trying to do to fix it? It is the new TACAMO we are talking about as the primary fix plus in the early 1990's we will [deleted].

Senator RUDMAN. What does that mean?

Mr. LATHAM. It means that we would have these equipments based on the [deleted].

They use a [deleted]. We are looking both ways; in fact, for ELF to do it the same way.

They would be activated for [deleted].

Senator STEVENS. They are totally [deleted].

Mr. LATHAM. These are [deleted].

Senator STEVENS. At that point?

Mr. LATHAM. At that point and, as a result, you have to be very careful you are not located by direction finding or other means and get rolled up in this protracted situation.

Finally, following the hostilities you probably have nothing today if this [deleted]. Beyond the endurance of the TACAMO and NCA connectivity with the submarine force now [deleted] and thus we are trying to do something [deleted].

That briefly is how we intend to do it.

At that point in peacetime and throughout the attack period we have the capability today. To report back using these kinds of systems in the future, it will be [deleted].

[Chart 3 deleted.]

In addition we think the SLBM is the most survivable leg of the triad and thus the supporting communications must be equally survivable.

I am going to come to that point you made earlier about the cost of the Trident Program.

Today the [deleted]. If you want to get to the submarine by other means, he has to deploy a buoy antenna system up or put a periscope antenna up so that you can communicate to him with a higher frequency message.

VLF SIGNAL

Senator JOHNSTON. Is VLF from a wire in the ocean or form MILSTAR?

Mr. LATHAM. The VLF signal that is generated today is from large fixed land-based sites deployed around the world. Also it can be generated as we have heard directly from [deleted].

So, today really the TACAMO is [deleted].

Let me talk about the JCS mission requirements and bring out a point that was not brought out before.

[Chart 4 deleted.]

As the gentleman from the GAO said, this is the Trident operating area in the Pacific. A very key point as to why we want an area this large is that with the new [deleted].

That is very key. That is the primary reason, in addition to survivability for wanting to have the ability to have this entire area. It is a vital situation.

If the U.S. was in fact [deleted] you had better be in an area where you can do it.

So, we really want to be able to operate over the entire area here for [deleted].

Senator STEVENS. Mr. Secretary, that chart implies that if you had a plane orbiting between [deleted].

Mr. LATHAM. This orbit area that we would put this facility in out here is about in here, sir, about [deleted].

Senator STEVENS. Am I correct, if they had that wire down at one place, all the boats in that area could receive the transmission?

Mr. LATHAM. Exactly. That is, a primary difference between the EC-130 and the E-6A is the number of aircraft you need in order [deleted]. I will show you that on a chart.

[Chart 5 deleted.]

BASING

Now basing. This is an important point that we believe is a factor in the E-6A versus an EC-130 platform.

First of all, on the east coast today the Navy has employed [deleted].

We want to do the same thing on the west coast. We do not want to base this equipment in the [deleted].

We are saying you want to perform west coast [deleted].

The bottom line is the [deleted] we believe is vital to survivability and endurance.

Senator MCCLURE. When you say west coast——

Mr. LATHAM. There are some tentative [deleted] selections and I don't know what they are.

Senator MCCLURE. How far [deleted].

Mr. LATHAM. That is another feature that is important. We will be able to surge the E-6A up to [deleted] if we want to and still make our orbit areas and the coverage we need with the aircraft.

[Chart 6 deleted.]

Let me talk about the [deleted]. The Soviets have [deleted].

Second, we have noted the [deleted].

They have [deleted].

So, taking out these [deleted]. Certainly under general war conditions we would be going after them, but in point of fact [deleted]. I assume we will have to live in a [deleted].

[Chart 7 deleted.]

You asked about the numbers. Here are the assumptions. We are assuming those improvements GAO spoke to will be going in. We believe they will be significant.

There will be new receivers going in on the TACAMO's. Using [deleted] we can get out to [deleted] with the EC-130 and [deleted] with the E-6A. We include the Atlantic squadron.

We assume dual injection using [deleted] support. On that basis [deleted]. That is the real reason we say you really need the E-6A if you are going to do it with the EC-130, you can, but you have to buy [deleted] of them.

The cost number he shows you and the cost numbers I show you are different because you must compare apples and apples. We are going to compare [deleted]. That is what makes the difference here between here between the cost of the programs especially when you consider 20 to 30 year life cycle costs.

[Chart 8 deleted.]

Let me show you some calculations we did on the problem of surging the force. This is again the operational area here. We are assuming a fleet of [deleted].

We have to get out to about this point in operational area in order to receive the injection from the coast this way and then inject the [deleted] and cover the operation [deleted]. If we surge the EC-130's, we are basing this on [deleted] per month surge and if we do that, we can either do two things.

We can either get [deleted].

[Chart 9 deleted.]

By running the airplane additional hours per month, up from [deleted] you can buy this amount of capability in a crisis or increased crisis situation.

If we compare that to the E-6A, you can achieve [deleted] this way further or I can base them [deleted] and keep them out of any initial surprise attack we might receive off this coast, from say, [deleted] or anything else right now.

So, I have more flexibility with the E-6A and I have more speed and range to take advantage of something like this.

[Chart 10 deleted.]

CROSSOVER COST ON EC-130

Let me look at cost. Senator Rudman made a very good point. We have a large amount of money sunk in the Trident Program. We have another [deleted] to go which adds to a total of [deleted].

What we are arguing here is that the margin, in my judgment I will show you the crossover cost on the EC-130, [deleted] of those, versus [deleted] of the E-6A's, so TACAMO costs become a less important factor, in our judgment, when you compare the absolute need to stay connected to the most survivable triad leg (Chart 12).

If you look at the bottom line (Chart 11), this number includes RDT&E procurement, MILCON. As a result of the E-6A investment of $1.8 billion over a total initial investment cost of the program, R&D plus procurement is less than 3 percent.

E-6A ACQUISITION

FUNDING ($M):

	FY 84	FY 85	FY 86	FY 87-90
RDT&E	70.1	76.7	86.3	114.0
PROCUREMENT	97.7	0	400.2	1137.0
TOTALS	167.8	76.7	486.5	1251.0

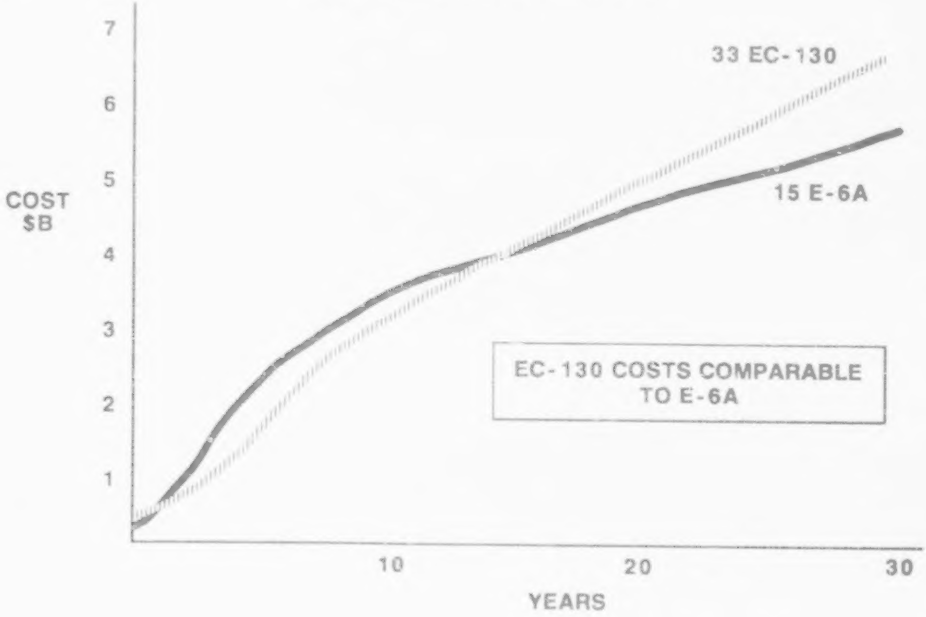
FY 86 PROGRAM:

- PROVIDES FOR CONTINUED AIRFRAME DEVELOPMENT
  - PRODUCTION PROCUREMENT BEGINS

MILESTONES:

- DELIVER PROTOTYPE 2 QTR FY 89
  - IOC 2 QTR FY 90 (7 ACFT FOR PACIFIC OPERATIONS)

COST COMPARISON



TOTAL E-6A COST

If I am looking at the President's budget out through the 1990 time frame, we have a total cost for the E-6A of about $1.3 billion. This provides in the fiscal 1986 program, $486 million for the continued airframe development and production and procurement to begin.

I went out to Boeing last week. Sometimes when you are out there you can see a full-scale mockup of an E-6A. Then I want you to get down to the Patuxent and get on the EC-130 and ride it around on a mission. I think there will be nothing more to convince you than that that we ought to do something.

It is like night and day in the layout inside the plane and crew comfort and ability to handle mission equipment.

To the point that the GAO raised, they have a second thing out there. They have an actual 707 airframe in which they are now integrating this communications equipment that will be taken off the EC-130. That is running the wires, electrical cable, and so on.

The point being that this is a much bigger airframe. There is more room to put the equipment. It is a much easier job, in fact, integration is a very low risk situation.

The second point. The [deleted] have paid for the reengining of the AWACS airframe. It will have CFM-56 engines. They paid for R&D. We are taking advantage of that. The E-6A has CFM-56 engines on it. It is an AWACS airplane, it is not a 707 airframe. It is an AWACS airplane. It is EMP hardened. It has avionics that AWACS has. It has airborne refueling. We have had a lot of experience with the airframe. It is a low-risk airframe.

We will have plenty of hours of experience with the AWACS before these E-6A's have to fly. So, the concurrency issue is not an issue, in my judgment. It is a very low-risk program.

COST FACTORS

Now cost. We have cost in billions of dollars. I compared [deleted]. The difference being that you finally cross over here around the 15-year timeframe because I am having to pay for the maintenance and fuel for a larger number of CFM-56 aircraft in order to sustain the same coverage of those OP areas.

It is true the EC-130 does 100 percent coverage in the Atlantic. In the Pacific, as I showed you with [deleted] of them you don't get the coverage anywhere near close to what you need.

[Chart 13 deleted.]

In conclusion on this, I would say if you look at the threat scenario and future threat, it favors E-6A because it has more options on what you can do to cope with those threats.

If you look at the area of cost, near-term investment, it would favor the EC-130. In 20 years it is a draw. In 30 years the E-6A would win out. [deleted]. If you look at the weight and volume issue, the E-6A has much more capability for growth. Further it provides flexibility and survivability.

Endurance is not there if you have to base the EC-130's [deleted]. If you base the EC-130's in [deleted] but we do not believe that is a [deleted] location to base these aircraft. [Deleted.]

Finally, fleet size favors the E-6A and versatility favors the E-6A.

[Chart 14 deleted.]

Lastly I would say [deleted] of the overall strategic forces. Connectivity is very sensitive to scenario assumptions and we understand and agree to that.

Whether [deleted] we don't know. We want to have the capability to cope with that and we can do that better with E-6A.

The range of the predictions says, look, build the system as flexible as possible. Don't constrain yourself and keep flying an aircraft, the EC-130, that is up against the stops now. Even an improvement program will not give you that much delta improvement in airplane performance.

We can respond with the E-6A a over a broad range of options and threats. There is room in there for growth to handle additional communications options if we want to put them in in future years. There is not that much growth in the EC-130.

The comparable flexibility requires additional EC-130's. That is why we came up with the analysis which shows you have to grow the fleet from [deleted].

Finally, we think the E-6A is needed to provide a [deleted] command and control system in support of Trident submarine force.

Thank you very much.

Senator STEVENS. May we have the lights, please?

I assume that you are all proceeding on the basis that these Tridents absolutely have to have the signal to perform the function?

Mr. LATHAM. Yes, sir. You cannot launch a missile from a Trident without receiving a valid emergency action message [EAM].

LOOKING GLASS-TACAMO LINK

Senator STEVENS. Can you tell us any more about what can be done to deal with the link as between Looking Glass and the platform that is going to transmit to TACAMO?

Mr. LATHAM. Yes, sir.

First of all, the VLF transmitters [deleted] the one on the NEACP, which is not the Looking Glass, by the way, the national emergency airborne command post, E-4B, is a [deleted].

The second thing we are doing, we are putting on an improved HF system that will have jam resistance and better propagation characteristics through the atmosphere.

The third thing, all the platforms we have today have [deleted] onboard so that we can go through the [deleted] into the platform.

We are also putting on-board a [deleted] UHF system that will be used for line of site communications.

Finally, in the out years, starting in [deleted] we take delivery of the first [deleted] among others.

As to the [deleted] system, as an example, that will probably be, despite all the discussions of star wars, and so on, the most [deleted]. I believe it is going to be [deleted] for a long period of time.

So, I would say you have several means then to get the EAM message from platforms command and control to the TACAMO's.

RELATIONSHIP BETWEEN TACAMO AND ELM

Senator STEVENS. Any relationship between TACAMO and the emergency launched missile?

Mr. LATHAM. We are continuing to keep the [deleted]. Those are being constantly maintained and upgraded.

Frankly, it is quite old equipment. There is a decision point, not too far in the future, a to whether or not one should continue those or to modernize the communications package. It can be made today much smaller and lighter. We might go ahead and do that. That is still another way to get the message into the TACAMO.

LAUNCH TIMEFRAME

Senator STEVENS. What is the timeframe for launch of those?

Mr. LATHAM. That is part of the SIOP. It would be a factor of what the [deleted].

Senator STEVENS. Assuming he made the decision, how long will it take to get one up?

Mr. LATHAM. If you inject [deleted].

Senator STEVENS. The assumption of this program is that all available surface naval craft are totally inoperable in such a process, communications process; is that right?

Mr. LATHAM. I never heard that, sir.

Senator STEVENS. You are not using them?

Mr. LATHAM. One of the things we didn't mention, but we would use is [deleted] they do not carry surface combatants [deleted] or anything like that, to [deleted]

They would have to communicate with the submarines using [deleted]

Senator STEVENS. Could they provide a link between the—what do we call that, the link between Looking Glass and TACAMO?

Mr. LATHAM. Surface combatants, if they were in the right area could provide a [deleted].

Senator STEVENS. Are vessels out there equipped to do that?

Mr. LATHAM. They can receive on certain types of equipment emergency action messages if they are properly equipped, which major surface combatants would be, and they could then perform a relay function.

Senator STEVENS. You also said they can't utilize the frequencies that are currently used for communicating with TACAMO; is that right?

Mr. LATHAM. No, sir; they could. [Deleted.]

It could be done technically. However, I wouldn't count on surface ships being in the right place at the right time to help.

EC-130

Senator STEVENS. You have EC-130's for this program in Hawaii now, don't you? How many?

Mr. LATHAM. I don't know how many.

Admiral KIRKSEY. We have [deleted] of them in Hawaii, but they [deleted] there also. They normally have [deleted] in Hawaii at once.

Senator Stevens. I didn't hear you.

Admiral Kirksey. They [deleted]. They are administratively and operationally based in Hawaii.

They leave very few aircraft actually operating orbits out of there. Their practice is dispersal. They operate from various bases [deleted].

Senator Stevens. I understand in Hawaii they couldn't receive the messages from this link in any event.

What are they doing out there now?

Admiral Kirksey. They do some maintenance. A lot of heavy maintenance is done.

Mr. Latham. If something happened today and we needed to get an emergency message to the Hawaii area, you could certainly get it to Hawaii through our communications station by several different means.

Senator Stevens. You are talking about from looking Glass to the intermediate platform to the TACAMO. [Deleted.]

Mr. Latham. That is correct. I do not have to rely on the [deleted]. That is not the only way to do it. There are several other media you can use to connect to a TACAMO aircraft that allow you beyond line-of-site capability such as the [deleted].

Senator Stevens. That is what I am searching for. It seems to me that that in-between link [deleted].

Where are those things based now, on the west coast? What are they, the link between the Looking Glass and EC-130. What is that now?

Mr. Latham. There are several different ways to do that between Looking Glass and EC-130 TACAMO. The primary means today, if they were beyond line-of-site, would probably be [deleted]. On that basis you could be [deleted].

AIRBORNE COMMAND POSTS

Senator Stevens. Where are the airborne command posts? Where are they located?

Mr. Latham. We have about [deleted] of them. They are located at various bases. We keep one on orbit 24 hours a day, one airborne command post.

Senator Stevens. Where?

Mr. Latham. That flies out of Offutt AFB, Nebraska.

Senator Stevens. I take it there are none of them in Hawaii?

Mr. Latham. We have several other bases in which we keep airborne relay aircraft and airborne command posts on ground alert. There are about [deleted] of these aircraft scattered at different bases. The NEACP is actually based in Indiana. [deleted]. So, they are scattered at different locations.

Senator Stevens. The [deleted] communications network today is that airborne platform; is that right?

It is not the EC-130 and it is not Looking Glass, obviously, or is it?

Mr. Latham. You are on the right track. The problem today, if I had to say what is our communications problem in the sense of what is in need of the most fixing, that would be [deleted].

There are a half dozen programs underway to fix those [deleted] and make them more robust, more jam resistant, and more resistant to nuclear effects. [deleted] being the most robust of the bunch.

You want to accommodate all the necessary media you can onboard the aircraft. That is one of the major factors as to why you have to either modify the EC-130 to accommodate say a MILSTAR terminal or put it on the E-6A.

TACAMO

Senator Stevens. What are we doing with TACAMO?

Mr. Latham. First of all, we have [deleted] in the Atlantic and Pacific. We then keep as backup [deleted] to replace those if something happened [deleted].

That is another range-speed issue with the E-6A. If you have an emergency and you needed to have orbit replacement, you want to get out there as fast as possible.

Also, you want to have an escape time to get off the runway and get out of there if you get a warning that nuclear weapons are on their way.

The E-6A can get out of there faster.

Senator Stevens. The last question.

When do all of these communications improvements that are assumed take place?

Mr. Latham. They come in over a number of years. For example: E-4B's are all in place with [deleted] transmitters onboard and [deleted] both receive and transmit. The CVLF receivers for the Navy's airborne TACAMO's will be available in about the [deleted] timeframe.

The MILSTAR is [deleted]. So, they come in over this next decade at different times.

Senator Stevens. Senator Rudman.

Senator Rudman. Thank you, Mr. Chairman.

I have only a few questions.

ECX

The first question I have, I want to get one thing clear in my mind. When the ECX was issued back in 1982 there was a so-called [deleted]. They would get the [deleted].

I take it that is now changed. I take it your mission now, the specification of this aircraft and this equipment and all the links receive and transmit simultaneously; is that correct?

Mr. Latham. That is correct. We don't [deleted].

Senator Rudman. Whether you want to agree with that operation decision or not, that is up for the Navy to make?

Mr. Latham. It is a JCS decision.

Senator Rudman. If the JCS makes that decision, obviously speed and range gets very important. I am not going to favor E-6A or EC-130. I want to know whether or not what we are going to do is maybe postpone the inevitable because in answer to the chairman's last question, if these other systems come onboard and technically they work, and [deleted] we have MILSTAR and everything else is working, at that point you are going to have to buy something else to communicate. You don't have the choice.

With all respect to modifying MILSTAR communications package to fit on the EC-130, I flew for 2½ hours at Barbers Point on an EC-130, both in front and back. I don't think you can get a can of beans in the back the way that thing is configured right now.

Does the Navy think it does have a conceivable solution for the MILSTAR reception problem put in the EC-130?

Mr. LATHAM. Yes, sir. If you were to go through the EC-130 improvement program which included adding a plug to lengthen the aircraft, you could accommodate additional equipment onboard.

By doing that, you could probably incorporate a MILSTAR terminal.

Senator RUDMAN. You are talking about extending the airplane like we did with the 141?

Mr. LATHAM. Exactly.

Senator RUDMAN. That is a lot of money?

Mr. LATHAM. Yes, it is.

Senator RUDMAN. We are trying to save money. Obviously, if we had unlimited money, we could write a check for the E-6A's.

The question is which will be better and more useful.

Senator STEVENS. Mr. Cann.

Mr. CANN. I would like to ask Mr. Crawford to amplify on that point.

Mr. CRAWFORD. In the current configuration of the E-130 you can accommodate the MILSTAR terminal. It has an additional load-carrying capability in the airplane. The configuration we looked at was mounted above the turning equipment in the upper skin of the airplane.

Senator RUDMAN. You would have to cut down on the fuel?

Mr. CRAWFORD. No.

Senator RUDMAN. I thought one of the charts indicating zero growth potential.

Mr. CRAWFORD. That was GAO's chart. They presented their views. When we looked at the analysis in the Navy, we found the EC-130 could accommodate the MILSTAR terminal and has 6,000 pounds of growth potential as it flies today.

Mr. LATHAM. That is controversial.

Senator RUDMAN. Obviously. That is not what the people told me at Barbers Point. After all, they only fly the airplane.

Mr. CRAWFORD. It is clearly a decision the commander makes on the ground. You can fly the airplane at [deleted] gross takeoff weight.

Senator RUDMAN. I don't know, but I suppose unless you add runway length and everything else, if you start adding weight to that airplane, I am not sure I would want to ride in it.

The last question.

E-6A ORBIT MANEUVER CAPABILITY

One of the technical issues is the question as to whether or not the E-6A can perform that orbit maneuver at the altitude it would be at consistently and well and understanding aerodynamics and low wing stall, and so forth, are you really sure of that, Mr. Latham?

Admiral Kirksey. Yes.

Senator Rudman. Are there some naval aviators here that can talk about that?

Admiral Kirksey. That question came up during DRB last year. Some of the figures presented were that the E-6A could not perform the same orbit.

Senator Rudman. I have heard that alleged, but I don't know.

Admiral Kirksey. It was alleged. The research that Navair did, the independent data analysis on the aircraft indicated it would certainly tend——

Senator Rudman. The question I am asking, Mr. Chairman, is once the E-6A gets out there on station, can it go into this [deleted].

That can be lots of fun in a Piper Cherokee. I am not sure about a 707.

ORBITING PERFORMANCE

BOEING FLIGHT TESTS

DATE	AIRCRAFT	ENGINES	TESTS	RESULTS
NOV 1977	707-320	JT3D-3B	• 4 ORBITING	• VALIDATED ORBIT PREDICTION ANALYSIS • CONFIRMED STALL MARGINS
DEC 1977	707-320	JT3D-3B	• 4 ORBITING	• DEMONSTRATED ORBITING CAPABILITIES TO NAVY REPRESENTATIVES
SEP 1979	E-3A	TF33	• 11 ORBITING - 1 ON 3 ENGINES - 2 ON AUTOPILOT	• SIMULATED WIRE DRAG WITH ROTODOME • ACHIEVED CONDITIONS FOR WIRE VERTICALITY 70%-85% ALL WIRE LENGHTS
JAN 1980	707-700	CFM56-2-D1	• 5 ORBITING - 1 ON 3 ENGINES - 1 ON AUTOPILOT • 1 TAKEOFF ON 3 ENGINES • 1 SHORT FIELD LANDING • SERIES OF STALLS	• DEMONSTRATED HIGH GROSS WEIGHT ORBITS • DEMONSTRATED HANDLING CHARACTERISTICS WITH NAVY PILOTS • DEMONSTRATED SHORT FIELD CAPABILITIES
MAY 1980	707-700	CFM56-2-D1 (22,000 LBS)	• CRUISE PERFORMANCE • SERIES OF STALLS • 4 ORBITING - 1 ON 3 ENGINES • 2 SHORT FIELD LANDINGS • 1 SHORT FIELD TAKEOFF • 1 3-ENGINE TAKEOFF	• NAVAL AIR TEST PILOT AT CONTROLS • DEMONSTRATED HANDLING QUALITIES • OPERATED AT HIGH ENDURANCE FUEL FLOW • DEMONSTRATED AIR START • VERIFIED SHORT FIELD CAPABILITIES
MAR 1984	E-3A	TF33	• INS DRIFT DURING EXTENDED (2.5 HR) ORBIT	• VERIFIED NO SIGNFICANT INS DRIFT DURING ORBIT

Mr. Latham. Here are some data that go back to 1977 when they used the 707 airframe and validated the orbit, confirmed the stall margin and demonstrated it to the Navy in December 1977.

Senator Rudman. Is that with or without [deleted].

Mr. Latham. I am not sure. In September 1979 with an EC-3A aircraft which is the AWACS it did orbit on just three engines. [Deleted.]

Then in January 1980 we did some additional tests. Again, an important point is that the E-6A can orbit on three engines. You can take off on three engines. You can make short field landings.

It demonstrated these characteristics over here at the high gross weight of the airplane.

In May 1980 with a 707-700 airframe with CFM-56, we did these kinds of tests here. Again, short field takeoffs and landings with a naval air test pilot at the controls.

I think the Navy would say that would verify the short field capability.

In March 1984 with an E-3 they did some navigation studies and verified that you can in fact hold the orbit.

ORBITING TESTS

Senator RUDMAN. Very well. There was an allegation that the orbiting itself was done on a simulator. That isn't true.

Mr. LATHAM. It is not true.

Senator RUDMAN. It was done with actual airplanes and I take it the only thing that might have been simulated to some extent and proven out on the computer was the [deleted].

Mr. LATHAM. Yes, sir, out of the 707 airplane.

Senator RUDMAN. Thank you, Mr. Chairman.

Senator STEVENS. Senator McClure.

Senator MCCLURE. Thank you, Mr. Chairman.

As I recall, there was talk earlier of the orbiting location would be governed by the communications in the worst case; is that correct?

Mr. LATHAM. Yes, sir. You set up what is known as [deleted] which you have preselected and don't use except in a wartime situation. You stay away from those orbit areas trying not to give the bad guys the location and things of that nature.

Senator MCCLURE. This presupposes [deleted] ECM?

Mr. LATHAM. Yes, sir. You pick these [deleted] locations based on [deleted].

Senator MCCLURE. Either aircraft can meet those restrictions at the current time?

Mr. LATHAM. Yes and no sir. As the GAO showed you, we are currently orbiting the EC-130's in areas that as a result of those orbit areas, we are in fact [deleted] deployment to only a fraction of [deleted] like to operate in to about 40 percent of the available [deleted].

Senator MCCLURE. Until you change your communications capability to TACAMO, you can't change that [deleted].

Mr. LATHAM. Yes, you could.

Senator MCCLURE. How?

Mr. LATHAM. By using [deleted].

Senator MCCLURE. I understand that, but the decision has been made not to do that.

Mr. LATHAM. I am not sure that has been made.

Senator MCCLURE. The current [deleted] has been set?

Mr. LATHAM. I think if the situation got to where we thought it would improve the situation in a crisis, we would change those orbits further out, increase the orbit area.

Senator MCCLURE. Taking greater command and communications?

Mr. LATHAM. You have several possibilities that don't come out in little cartoons.

First of all, there is a [deleted]. If necessary, you can put up other airborne relay aircraft.

One has flexibility to change that [deleted] if you wanted to do that. Today in a peacetime environment you keep them [deleted].

Senator McCLURE. The limiting factor, however, is the [deleted].

Mr. LATHAM. Yes, sir. More than anything else [deleted].

Senator STEVENS. Senator D'Amato?

Senator D'AMATO. I have no questions, Mr. Chairman.

Senator STEVENS. Tell me, Mr. Cann, my staff tells me we should note you are probably stepping down in a few weeks and may not be back with us again.

Mr. CANN. That is correct.

CUTS IN E-6A AND EC-130

Senator STEVENS. Let me ask you the $64 question.

Why, if this is the program that Secretary Lehman offered up as first on his list of cuts, this internecine warfare is still continuing over these?

Mr. CANN. First of all, I would like to summarize the discussion here. A lot of good factors have been presented.

I think one of the points that should be kept in mind is that the communications suite is common between aircraft. One way or the other, the communications has to be common.

Most of the discussions has revolved around the case of the aircraft. Clearly the E-6A is a better aircraft in terms of endurance and range and payload, and so forth.

However, the fundamental issue that you have to address is the [deleted]. In the case of the E-6A the indication is that you can take advantage of not only the [deleted] scattered around the Pacific, of which [deleted] are probably usable, really usable, but you can take advantage of some [deleted] perhaps scattered around the west coast.

The issue really turns on your perception or your desire to [deleted] and that I understand from a probabilistic point of view is the probability of those [deleted].

Senator STEVENS. Why didn't you do it in some of those? You bring in a bunch of guys like us with results like that in a test. Why didn't you use some other pattern for communications with TACAMO to see that it could be done?

Most of us are concerned with the communications [deleted] rather than EC-130 or the E-6A.

Why haven't some other tests been run to make sure TACAMO works before we buy any more of anything?

Mr. LATHAM. We have. That chart that was shown to you was only one communications media and not any of the others. When we take the aggregated set of ways that you can transmit a message from aircraft and others, the [deleted] show that we are significantly better than that, up in the [deleted] percent range.

Senator STEVENS. It is not an unfair chart. That is the only time you would use it under the circumstances?

Mr. LATHAM. I don't agree with him on that point.

Senator STEVENS. Why? What else survives other than that?

Mr. LATHAM. Everything is very scenario dependent. You have to say how many nuclear weapons have gone off and where. [Deleted.]

Senator STEVENS. You have to assume that the land communications are out?

Mr. LATHAM. The land-based communications [deleted].

Senator STEVENS. You are presuming [deleted].

Mr. LATHAM. No. I didn't say that. You can give them orders to [deleted].

SYSTEMS COMMUNICATIONS

Senator McCLURE. To get back to that, if I understood an earlier question, the operating criteria were based upon that worst case limitation and you came back later to say, but we might in anticipation of that crisis change the operating criteria.

Mr. LATHAM. Change locations of relay aircraft, put more relay aircraft up, things of that nature, so that you would have a better chance of being sure that you are connected.

Senator STEVENS. You say that you could give us some other information.

Mr. LATHAM. I have made a note of that. I will give you much better explanations on detailed numbers on the [deleted]

[The information follows:]

For 1984, the data shows that the combined all source (satellite, HF, VLF/LF) connectivity to the TACAMO was [deleted]. On a system by system basis, the VLF/LF data presented by the GAO for TACAMO PAC connectivity for the fourth test in 1984 (84-4) was [deleted]. Additionally, VLF connectivity to TACAMO PAC for the three preceding tests in 1984 was [deleted]. The other VLF/LF data presented by the GAO and attributed to [deleted] was actually obtained from VLF/LF daily test programs whose purpose is to support operator training and promote the use of the VLF/LF systems. Of significance is the fact that these tests are conducted at one-half power.

Senator RUDMAN. Mr. Secretary, I am glad this is a closed hearing because your answers sounded like the chairman thought it sounded, if that is what you meant.

Mr. LATHAM. I didn't.

Senator RUDMAN. One of the things that you have an option to do if you have that [deleted]. It will be a little riskier for them, but you could do that?

Mr. LATHAM. [Deleted.]

Senator RUDMAN. I am not saying [deleted] I am saying [deleted]. They have other means of receiving?

Mr. LATHAM. [Deleted.]

Remember, we have been saying the [deleted].

Senator RUDMAN. It depends on where they are. A lot of submarines will be down at depth and will have to wait to get [deleted].

Mr. LATHAM. [Deleted.]

Senator RUDMAN. Under the current operating procedure, under the current rate of transmission with [deleted].

Mr. LATHAM. It becomes another communications process.

Senator RUDMAN. Exactly. There are other ways. That is very important for people to understand.

We have probably learned more here today than we normally learn in the dog and pony shows we have.

Senator STEVENS. Put that last comment on the record.

Senator RUDMAN. That is perfectly all right with me.

Senator STEVENS. Thank you very much. You have both presented it in a manner that is very professional.

We have had fairly good attendance for this kind of hearing. It shows the interest in it.

SUBMITTED QUESTIONS

The committee has a number of questions which we will submit for your response. They will be inserted in the record at this point.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

TACAMO VULNERABILITY

Question. A new book, just published by the Brookings Institution, entitled Strategic Command and Control, states: "Under day-to-day conditions, surprise attack might destroy all but SAC's LOOKING GLASS aircraft and the TACAMO aircraft on twenty-four-hour alert. High confidence LF radio communications from LOOKING GLASS to TACAMO do not exist, even when TACAMO is operating in the Western Atlantic. Furthermore, destruction of backup ground-alert TACAMO aircraft would reduce the likelihood that all alert submarines in the Atlantic would copy a message transmitted by a single aircraft stationed in the Western Atlantic." do you agree with that statement?

Answer. No. The National Emergency Airborne Command Post (NEACP) is postured to survive a surprise attack. NEACP and LOOKING GLASS would provide the connectivity to a TACAMO aircraft operating in the Western Atlantic. The NEACP 200 KW transmitter has none of the problems associated with the 20 KW transmitter on LOOKING GLASS. Upgrades to the LF radio communications on LOOKING GLASS are needed. The technical problems with the LOOKING GLASS LF radio are well known, as are their solutions. The real LF radio problem is funding priorities which, as the book discussed, are common to many strategic command and control programs. Survivability of the ground alert aircraft depends upon random basing. Inherent vulnerabilities in the EC-130 stemming largely from the limited speed and range capabilities and its overweight condition which restrict the incorporation of needed communication improvements and survivability enhancements prevent it from being postured for safe escape.

Question. Specifically, how does E-6 correct that situation.

Answer. The long-range and high-speed capabilities of E-6 enable it to operate from inland remote alert bases which greatly reduce its vulnerability to surprise attack. The E-6 also has the self-contained capability to monitor critical warning networks while on ground alert to enable a quick reaction takeoff capability.

TACAMO COMMUNICATIONS

Question. The Brookings Book also states: "The TACAMO ECX program addresses all Deficiencies except for modernizing the communications equipment. A major unresolved problem with respect to future TACAMO performance concerns their aging, unreliable communications equipment. ECX communications are not slated for replacement or modernization despite problems with reliability." What are these communications deficiencies referred to in the Brookings Book?

Answer. Reliability problems with HF equipment, VLF power amplifiers as well as trailing wire antennas are known deficiencies with the TACAMO communications equipment. Injection and down link range limitations of the VLF equipment on TACAMO are also known deficiencies. Programs have been initiated to overcome all known communication deficiencies.

Question. Is the Book correct; are you or are you not planning to upgrade TACAMO communications equipment?

Answer. The book is incorrect: the Navy is planning to upgrade the TACAMO communications equipment.

Question. So, are you planning to put the same old communications equipment in the E-6 TACAMO you have in the EC-130 TACAMO's?

Answer. The E-6 TACAMO Program is in two phases. Phase one would develop the E-6 aircraft and would use mostly transplanted avionics but upgraded with available, improved equipments where possible. These avionics enhancements would provide at least an interim solution to most of TACAMO's avionics deficiencies. Phase two would develop a long-term avionics solution referred to as ACS (advanced communication system). ACS would be incorporated into the E-6 when it was fully developed and tested. The combination of E-6 and ACS represents what would be a total long-term solution for the TACAMO mission.

Question. What R&D is being undertaken to improve TACAMO communications for the new E-6?

Answer. The Navy has conducted a series of studies to define the Advanced Communications Suite (ACS) requirements and configuration. These Navy studies have been complemented by funded, industry studies on ACS definition and on unique hardware developments. It should be noted that ACS has only [deleted] TACAMO-unique equipment requirements. [Deleted.] Most of the other equipment developments which are planned for ACS, are on-going for other programs, some of these will be phased into the E-6 Program at an earlier date to overcome known deficiencies. Equipments like CVLF and MILSTAR are examples which would provide connectivity improvements as part of the ACS.

Question. There are a number of deficiencies in the existing EC-130 TACAMO fleet. The E-6 procurement is designed to improve our ability to communicate with our nuclear submarine fleet during a crisis. Will the E-6 (A Boeing 707) totally replace the EC-130s, or does the Navy plan to maintain some EC-130s as backup TACAMO aircraft?

Answer. Current Navy planning calls for replacing 20 EC-130's with 15 E-6's. This plan includes removing mission avionics from [deleted] of the 130's for installation on the E-6's. The first E-6 will use newly manufactured mission avionics to minimize the impact on sustaining current EC-130 operational capability.

Question. Where are TACAMO, aircraft presently based?

Answer. The Atlantic and Pacific each have a MOB (main operating base) which is really a home port for squadron personnel and scheduled maintenance operations. Individual aircraft cycle through the MOB for crew changes and maintenance, but spend most of their time at remote dispersal bases when not flying operational missions. Aircraft are away from the MOB for typically two week tours and are equipped to handle normal maintenance while away from the MOB. [Deleted] of operational mission are actually initiated from the MOB and this is usually for the start of each tour. At any given time, there are [deleted] aircraft at the MOB where they are being readied for their next tour or being used for training. Normally [deleted] these aircraft can be made available on short notice, if needed, to relieve an operational aircraft which may develop a problem. The major change to this operational concept for the E-6 will be a much larger number and wider distribution of remote dispersal base options. The speed and range of the E-6 gives its greater operational flexibility in adjusting to this operational concept and responding to changing situations.

Question. Will the E-6's be based in the same locations or at different bases?

Answer. While it is planned the E-6's will have the same MOB's as the current EC-130's, the significant difference is its dispersal basing [deleted]

Question. Will new military construction requirements be necessary for the E-6?

Answer. Construction at NAS Barbers Point would include a new two-bay aircraft maintenance hangar, an enlisted maintenance training facility, and a facility to house flight simulators. Additionally, a small Contractor Logistics Support facility to house E-6 spare parts would be required. On the East Coast, adequate training facilities are available. The aircraft maintenance hangar requirement is under evaluation. MILCON funding for the E-6 Program has been included in the FYDP for FY '87 and FY '89.

CONCLUDING REMARKS

Senator STEVENS. Mr. Cann, I wish you the best. I don't know why a young fellow like you is retiring.

Mr. CANN. I am not retiring. I have decided after 8 years in the job I have been in and 15 years in the Pentagon, it is time to do something different.

Senator RUDMAN. That fellow must be a lawyer. That is a perfect answer.

Mr. CANN. As a technical person, I would like to go back and do something technical.

Senator STEVENS. That makes me feel better. I hate to see these young people come here and say they are retiring.

Mr. CANN. I am not as young as you think.

Senator STEVENS. Take care.

[Whereupon, at 4 p.m., the subcommittee recessed, to reconvene at the call of the Chair.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 1986

WEDNESDAY, MAY 15, 1985

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 9:30 a.m., in room SD-192, Dirksen Senate Office Building, Hon. Ted Stevens (chairman) presiding.

Present: Senators Stevens, Andrews, Kasten, D'Amato, Rudman, Proxmire, and Sasser.

DEPARTMENT OF DEFENSE

DEPARTMENT OF THE ARMY

STATEMENTS OF:

HON. JAY R. SCULLEY, ASSISTANT SECRETARY OF THE ARMY (RESEARCH, DEVELOPMENT AND ACQUISITION)

LT. GEN. LOUIS WAGNER, U.S. ARMY, RESEARCH, DEVELOPMENT AND ACQUISITION

ACCOMPANIED BY LT. GEN. BENJAMIN REGISTER, DEPUTY CHIEF OF STAFF FOR LOGISTICS

ARMY MODERNIZATION

REVIEW OF BUDGET

Senator RUDMAN [presiding]. Chairman Stevens will be along shortly. He has asked if, in his absence, I will start the hearing. Unfortunately, I have a schedule this morning that will force me to leave here about 2 minutes before 10. I would expect that I will have some questions for the record for you on the modernization program.

We are here this morning to review the Army's modernization program for fiscal year 1986. The total budget request for R&D and procurement is $26.6 billion, up $2.9 billion from last year. This is about a 5-percent increase for procurement and a 15-percent boost for R&D in real terms.

The O&M request to support the fielding of these new systems in the Active and Reserve Forces is $2.6 billion, up 18 percent or $400 million over 1985.

The committee notes that through fiscal year 1985, the Congress has funded about half of the Army's major systems modernization. This 1986 request continues or increases procurement of these major systems while the fielding rates continue to increase as the 1984 and 1985 programs deliver.

INTRODUCTION OF WITNESSES

Today we welcome back Assistant Secretary Jay R. Sculley and Lt. Gen. Louis Wagner, the Army's top people in research and development, and acquisition. They are accompanied by Lt. Gen. Benjamin Register, the deputy chief of staff for logistics, on his first visit before the committee.

Dr. Sculley, your prepared statement will be entered in the record. If you and General Wagner would like to make a few brief opening remarks, we are prepared to proceed.

Of course, we would like some opening remarks from yourself and General Wagner. We understand that you have a commitment out of the city, Dr. Sculley, about noon and would like to be excused about 11:30. That is probably going to be possible.

Before you proceed, let me first ask my friend from Wisconsin if he has an opening statement.

Senator PROXMIRE. I have no opening statement. Thank you.

STATUS OF ARMY MODERNIZATION PROGRAM

Mr. SCULLEY. Thank you very much, Senator Rudman and members of the committee.

In an attempt to be brief, I would care to just emphasize that in fact the Army is approximately one-half way in its modernization program. I would emphasize that the need for your continued support to allow us to pursue the development of those items that in fact would allow the Army to execute its air/land battle doctrine.

I would also add that we have a substantial effort to improve our acquisition management in the Army. A couple of points I would make in that area.

MULTIYEAR CONTRACTING

Since 1982 through multiyear contracting we have been able to demonstrate savings of approximately $1.2 billion and in our fiscal year 1986 request we project $800 million in savings through multiyear contracting.

I would also emphasize that during this period and as part of my prepared statement we have fairly placed the risk in the private sector through the change of contracts from cost-plus to fixed-price incentive and in cases of fixed price incentive contract, to firm fixed-price contracts. We think that is prudent management.

We ask the committee for continued support of these programs.

General Wagner will now get into some of the details of our request.

[The statement of Mr. Sculley follows:]

PREPARED STATEMENT OF JAY R. SCULLEY

ASSISTANT SECRETARY OF THE ARMY

(RESEARCH, DEVELOPMENT AND ACQUISITION)

Mr. Chairman, members of the committee:

It is a privilege for LTG Wagner and me to appear before this committee to explain how our Army proposes to continue its modernization program. We look forward to working with you to meet our common goal--that of providing an Army of excellence.

In the past, we referred to budget increases as important first steps toward resolving significant deficiencies in both quantity and quality of our arms and equipment. I can report to you today that your support has begun to show a payoff in our Army.

The dollars appropriated through fiscal year 1985 provide us roughly half of the quantities of major systems we plan to procure. These graphs show the progress for some of our major hardware items.

This past support is also beginning to show payoffs in the amount of hardware that has been produced and is available for our soldiers use. Today we have over 2500 M1 tanks, 1500 Bradley's, 20 Apache's, 15 Patriot fire units, 600 Blackhawks, 23000 CUCV's, 10000 5 ton trucks and 6800 STINGER missiles.

To continue and support these past efforts we are presenting a combined procurement and RDTE request of $26.6 billion for fiscal year 1986. These funds will continue the improvement of the army's near-term readiness posture, continue to modernize the total force, and support research and development of future weapon systems.

The only way for us to overcome the threat we face is to use our technology to modernize our forces. The air land battle doctrine provides the doctrine for how we operate today and for the systems which must be developed for the Army in the twenty first century. The air land battle is one battle consisting of three parts: deep attack, close-in, and rear battle. The synchronization of weapon systems for the three parts of the battle are essential to provide the commander the combat power to win the key battle along the forward line of troops. Continued research and development is essential to provide follow-on systems that will provide this synchronization of the battlefield.

The deep battle portion of the air land battle seeks to delay, disrupt, or destroy the enemy's succeeding echelons and isolate committed forces. systems such as the Remotely Piloted Vehicle (RPV), Joint Surveillance and Target Attack Radar System (JSTARS), Multiple Launch Rocket System (MLRS) and Joint Tactical Missile System (JTACMS) are key to allow the combat commander to detect, identify, and attack deep targets.

The commander must allocate combat power to protect the rear battle area. Air defense of the rear battle area is essential to the execution of air land battle. Patriot, Roland, Improved Hawk and Chaparral will provide this protection.

The primary objective of both the deep attack and rear battle forces is to provide the commander the ability to destroy the enemy close-in along the forward line of troops. The Abrams Tank and the Bradley Fighting Vehicle systems have the capability to be able to rapidly close with the enemy. The Apache Attack Helicopter is key because it provides the rapid reaction vital to close-in support. At the same time, the Sgt York and Stinger provide the air defense protection needed to execute decisive action along the forward line of troops.

The key elements which tie the total effort together and allow the combat commander to control his manuever elements are his communications, command and control. Systems such as the Single-Channel Ground and Airborne Radio System (SINCGARS), Army Data Distribution System (ADDS), Mobile Subscriber Equipment (MSE) and Joint Tactical Fusion System are a must to ensure success.

In short, our modernization effort today and in the future must be viewed as a coordinated effort in several different areas. We should not look at the effort on a system by system basis and assume no interrelationships.

It is important to note that our modernization effort also applies to the reserve components, a key element of our total Army. National Guard and Army Reserve units are receiving and will continue to receive new and improved systems as part of the total force. Their requirements are built into the Army's acquisition plans to cover the full spectrum of their mission needs. For example, a battalion of the North Carolina National Guard has received Abrams and Bradleys. Three more National Guard Abrams and Bradley battalions will be fielded this year. Other systems such as Roland and Stinger air defense systems, utility helicopters, upgraded Cobra helicopters, and other essential systems are being issued to reserve component units. The fiscal year 1986 budget includes provisions for a number of accelerated reserve component equipment packages. the request includes accelerated upgrade of tanks to the M60A3 model and conversion of AH-1G Cobra attack helicopters to the s model.

A final area I would like to touch on is our effort to improve our management of the acquisition process. The army is firmly committed to improving acquisition management. We believe our current efforts are paying off with lower costs and more coherent and stable acquisition programs.

Multiyear contracting is a means to reduce costs, prevent program stretchouts, and ensure early fielding of new systems. With the help of the Congress, we have been able to achieve savings from multiyear procurements in excess of $1.2 billion since fiscal year 1982. To continue this effort, we are proposing multiyear procurements for the M1 fire control, M1 engine, M1 chassis, T700 engines and M9 ACE in our fiscal year 1986 budget. The projected savings from these contracts are over $700 million.

We have also made an effort to improve our contracting to achieve better program control. This chart shows that in fiscal year 1981 many of our major programs were under cost or incentive contracts. Today we have most of these programs under fixed price arrangements.

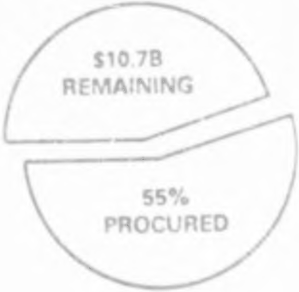
Additionally, we have taken continued steps to increase competition. New programs such as SINCGARS, LHX and Advanced Antitank Weapon System-Medium (AAWS-M) are all being developed to ensure competition throughout their acquisition cycle. We have recently appointed an Army competition advocate. Since 1980 we have increased our competitive percentage of dollars awarded, and will further increase competitive awards with the fiscal year 1986 budget request.

These various efforts to improve our acquisition management have produced concrete results in the price we pay for our hardware. Since 1981 we have been able to reduce the hours required to build a Blackhawk by 14 percent, a T700 engine by 28 percent and a M1 tank by 23 percent.

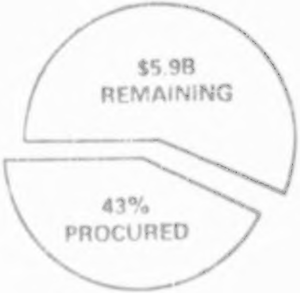
To sum up, these are challenging times for research, development and acquisition. Our Army requires a materiel acquisition program that will sufficiently equip the force in a timely manner, modernize it, and protect its future. The picture is brighter now than it has been in a long time, and our challenge is to keep it bright. To do this, we need your support to prevent any slip backwards.

MODERNIZATION PROGRESS
SYSTEMS PROCURED THRU FY85

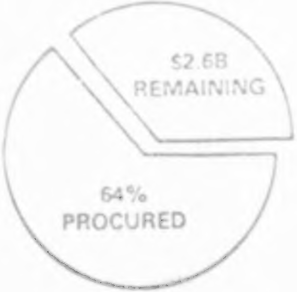
M-1 SERIES



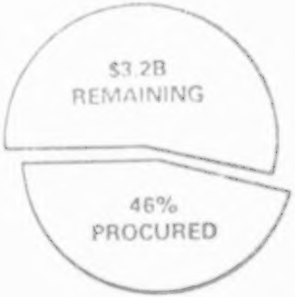
M-2/3



BLACKHAWK

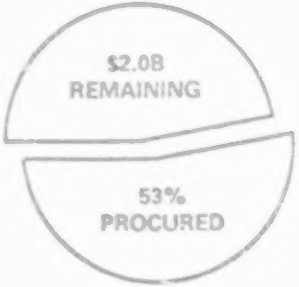


AH-64

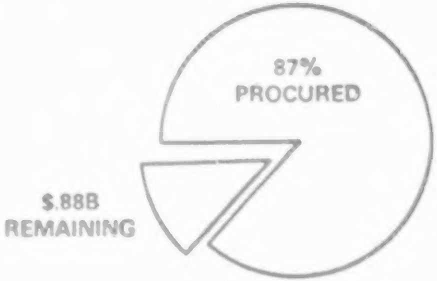


MODERNIZATION PROGRESS
SYSTEMS PROCURED THRU FY85

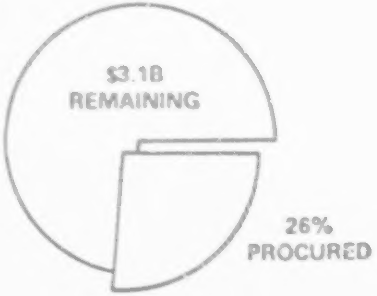
PATRIOT FIRE UNITS



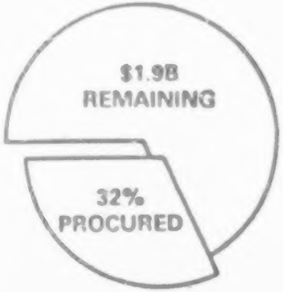
MLRS LAUNCHERS



PATRIOT MISSILES



MLRS ROCKETS



STATUS OF EQUIPMENT PROCUREMENT PROJECTED FOR 28 FEB 85

SYSTEM	ON HAND	TOTAL PROGRAM
Abrams	2,507	7,467
Bradley	1,591	6,882
Apache	20	675
Sgt York	36	614
Patriot	15	103
HMMWV	8	88,946
CUCV	23,565	68,210
5-TON	10,606	63,986
10-TON	3,206	17,119
Stinger	6,895	54,730

ACQUISITION BUDGET

($ In Millions)

	FY84	FY85	FY86
RDT&E	4215	4376	5280
PROCUREMENT			
Aircraft	3237	3901	3893
Missiles	2840	3158	3387
WTCV	4696	4548	5739
Ammunition	1980	2646	2635
Other	4656	5122	5713
TOTAL	21624	23751	26647

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MULTIYEAR PROGRAMS
(FY 82-85 STARTS)

	PROGRAM	SAVINGS $ (M)	FY'S
FY 82:	M1 FIRE CONTROL	131.1	82-85
	BLACKHAWK AIRFRAME	81.1	82-84
	ALQ-136 RADAR JAMMER	34.6	82-84
FY 83:	T700 ENGINE	75.1	83-85
	MLRS	209.1	83-87
	M60 THERMAL SIGHT	56.0	83-85
	BFVS (COMPONENT)	118.7	83-85
	PLRS	57.4	83-86
	HMMWV	88.0	83-87
FY 84:	NO NEW STARTS		
FY 85:	BLACKHAWK AIRFRAME	129.5	85-87
	CH-47D	153.4	85-87
	SHOP EQUIPMENT	74.3	85-89
	5-T TRUCK	60.0	85-87
	BFVS (TURRET DRIVE)	16.6	85-87
	TOTAL SAVINGS (FY 82-89)	1,284.9 (M)	

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MULTIYEAR PROGRAMS
FY 86 STARTS

PROGRAM	SAVINGS $ (M)	FY'S
M1 FIRE CONTROL	96.1	86-89
M1 ENGINE	159.8	86-89
M1 CHASSIS	393.7	86-89
T700 ENGINE	71.1	86-88
M9 ACE	31.2	86-90
M1 COMPUTER/CONTROL PANEL	7.3	86-89
BRADLEY TRANSMISSION	25.5	86-88
TOTAL SAVINGS: (FY 86-90)	784.7	

CONTRACT TYPE

	FY81	FY84/85
BRADLEY	FPI	FFP
M109	CPIF	FFP
AH-64	FPI	FFP
CH-47	FPI	FFP
HELLFIRE	CPIF	FFP
MLRS	FPI	FFP
PATRIOT	CPIF	FPI
PERSHING	CPIF	FFP
STINGER	FPI	FFP
COPPERHEAD	CPIF	FFP
SINCGARS	CPIF	FFP
PLRS	CPFF	FPI

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**OFFICE OF THE
DEPUTY CHIEF OF STAFF
FOR RESEARCH,
DEVELOPMENT AND
ACQUISITION**

SLIDE 1

MODERNIZATION PROGRESS

Senator RUDMAN. General.

General WAGNER. Mr. Chairman, in keeping with Mr. Stevens' request to not give an introduction of over 15 minutes, I am going to hit some of the highlights and then we will be prepared to answer any specific questions you may have.

When we put together an Army Research, Development and Acquisition Program, we have to tie it to the national strategy and the part the Army plays in that. We are the principal deterrent force for the land battle. We have to be prepared in case of was to fight a sustained long-term battle.

UNITED STATES DEFENSE STRATEGY

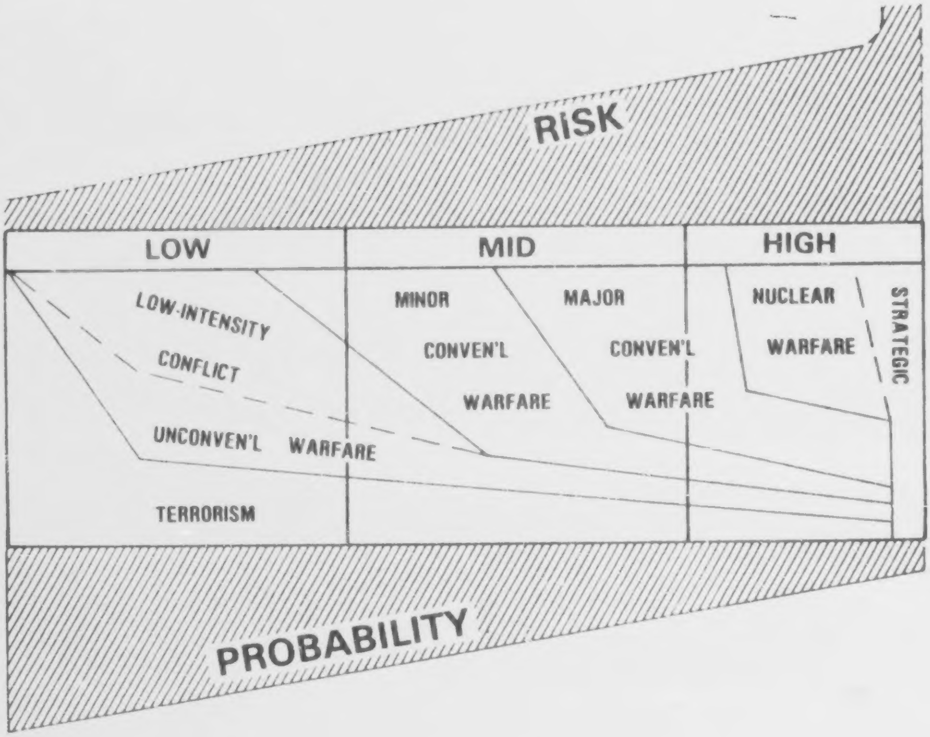
- **DETER AGGRESSION AND COERSION AGAINST THE U.S. AND ITS ALLIES**
- **SHOULD DETERRENCE FAIL, SEEK EARLIEST TERMINATION OF CONFLICT ON TERMS FAVORABLE TO US, OUR ALLIES AND NATIONAL SECURITY OBJECTIVES WHILE SEEKING TO LIMIT THE SCOPE AND INTENSITY OF THE CONFLICT**

SLIDE 2

FORCE STRUCTURE PREPAREDNESS

The principal problem we face is that with our force structure today we have to be prepared to handle any sort of contingency from terrorism, which is the most likely on the low side, to nuclear warfare on the strategic side which is the most serious. The nuclear battle is the single battle we can't afford to lose.

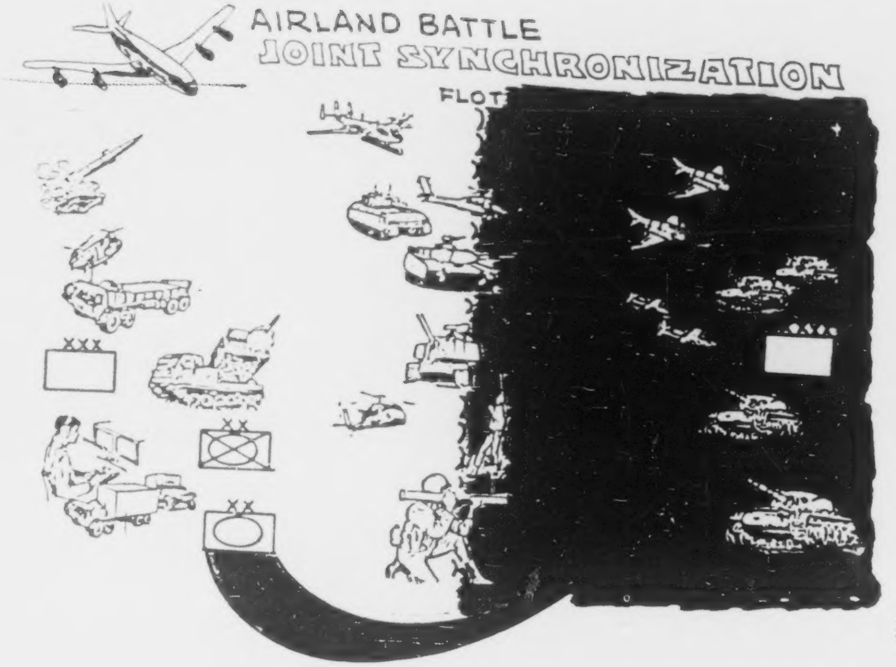
A SPECTRUM OF CONFLICT


RISK
LOW
MID
HIGH
LOW-INTENSITY
CONFLICT
UNCONVEN'L WARFARE
TERRORISM
MINOR
CONVEN'L
WARFARE
MAJOR
CONVEN'L
WARFARE
NUCLEAR
WARFARE
STRATEGIC
PROBABILITY

Slide 3

FORCE EQUIPPING

However, in putting together our program, you will find that the majority of our dollars go into equipping those forces that will fight the mid- to high-intensity war if it should come about because we must make sure that we can counter the threat in the particular area.



SLIDE 4

AIR/LAND BATTLE PREPARATION

When we consider how we will fight that battle which we refer to as the air/land battle, we look at being able to fight anywhere from [deleted] forward of the front lines, which we call the forward line of troops (FLOT), and up to 150 kilometers to the rear. It is the corps commander that has to orchestrate that battle.

In putting our program together this year, we looked at where our greatest deficiencies were. Some of our greatest deficiencies are the capability of affecting the enemy out to ranges of [deleted] beyond that front line. That is not to say that we think the battle will be won there. The battle is still going to be won by the infantryman, and the tanker in an eye-to-eye battle here in the front lines.

If we can affect the rate of attack of the enemy forces, control how he converges on the front line, we think we will be much more successful. To do that, we have three principal programs in our budget this year.

JSTARS

The first of these is joint JSTARS. This is a battle management and targeting system that provides a realtime sensor capability for wide area surveillance of moving and fixed targets beyond the FLOT. As he approaches closer to the front line, 30 to 40 kilometers, we will even be able to [deleted].

It is a joint program with the Air Force. They are providing the aircraft with the radar on it. Joint STARS is dedicated to support the corps commander.

In our budget we only have the ground station modules where we will receive the preprocessed data from the aircraft. After we receive that information, we have to have an all-source intelligence capability or joint tactical fusion program that is being primarily developed in the Army where we can analyze the data and then give the information to the corps commander to attack those forces.

JTACMS ARMY

Finally, we have to have the weapons to destroy enemy forces deep and it is a family of weapons between the Air Force and the Army. The principal weapon that you will find in this year's budget that we hope to field in [deleted] is what we call the joint tactical missile system Army, or JTACMS Army.

Other principal programs in this year's budget are, obviously, the tank, which we have been procuring for some time—we have 840 of those in the budget—the Bradley fighting vehicle, our attack helicopter, and the Sergeant York, which, incidentally, I am sure, we will discuss in greater detail later. The Sergeant York is doing very well in testing that we have conducted to date.

Finally, it gets down to that individual soldier for whom we have in our R&D program a new hand-held antitank weapon to give him a greater capability.

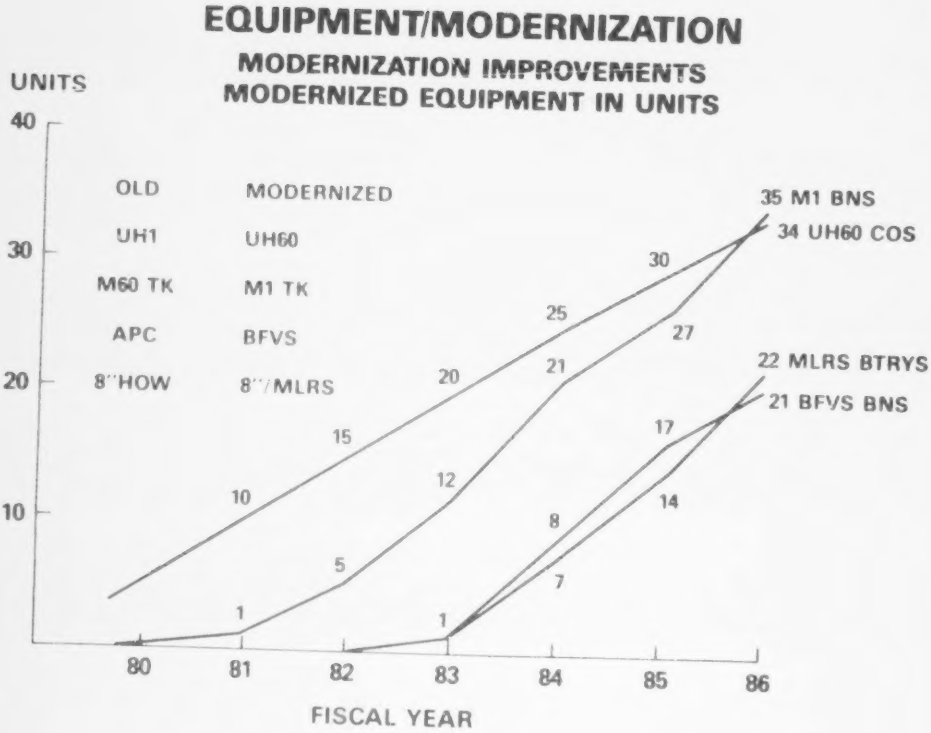
MOBILE SUBSCRIBER EQUIPMENT

The nerve center to provide the commander the capability of fighting this battle is not shown on this chart because it is a radio system. It is something called mobile subscriber equipment which is really similar to a cellular telephone system that gives the division commander, his brigade commander, and the corp commander, the capability of rapidly communicating with each other on the battlefield so that they can execute that battle.

Mr. Ladd has seen the system in detail on a trip to Europe when it was displayed. We are looking at an innovative way of putting that in the field very quickly by competitively buying it off the shelf. There are consortiums of foreign manufacturers, and U.S. manufacturers.

LHX

Finally, we have a new development called the LHX, or light helicopter experimental. We have not made a decision to go forward in full-scale development. I am sure we will discuss that more in detail in the following session.


EQUIPMENT/MODERNIZATION
MODERNIZATION IMPROVEMENTS
MODERNIZED EQUIPMENT IN UNITS

SLIDE 5

SYSTEM MODERNIZATION

To give you some idea of what has happened to the Army since 1980 in modernizing, I will consider these four of our major systems, the M1 tank, the UH60 Blackhawk helicopter, the multiple launch rocket system, and the Bradley fighting vehicle system.

We must fight as units in the Army. As a result, we are buying and fielding equipment by units in the Army so that we can fight more effectively.

DIVISION MODERNIZATION

For example, we modernize by divisions. In Europe today we have only one fully modernized division and that is the Third Mechanized Infantry Division. If you take that division as it is formed now with the new equipment and compare it with the same division in 1981, you will find that it is about 40 to 50 percent more effective on the battlefield than it was at that time because of the types of equipment that you have supported us in procuring over those years.

By the end of fiscal year 1986, which means that we were given the money to buy it in fiscal year 1984, we will have 35 M1 battalions, 34 Blackhawk companies, 22 multiplelaunch rocket system batteries and 21 Bradley fighting vehicle battalions.

FY86 PROCUREMENT INVESTMENT

8 ATK HEL BN EQUIVALENTS
MODERNIZED WITH APACHE
1178.2 144 AH-64

5CBT SPT AVN CO EQUIVALENTS
MODERNIZED W/BLACKHAWK
$267.0 78 UH-60

15 ARMOR BN EQUIVALENTS
MODERNIZED W/ABRAMS
$2108.8 840 M-1

12 MECH INF BN EQUIVALENTS
MODERNIZED W/BFVS
$1007.0 716 M-2/M-3

4 DIV EQUIVALENTS
MODERNIZED W/SINCGARS
$231.3 16K RT'S

WHEEL VEHICLE MODERNIZATION
$326.0 13K HMMWV
$225.3 2K 5-TON TRUCKS

NIGHT VISION DEVICES
$9.9 3.7K AN/PVS-4
$65.0 14.9K AN/PVS-5

2 HVY & 1 LT ENG EQUIVALENTS
MODERNIZED W/ACE
$85.0 70 M-9

ANTI-ARMOR MISSILES
20K TOW II $226.9
6K HELLFIRE $250.7

34 ARMOR/MECH INF BN EQUIVALENTS
MODERNIZED W/RECOVERY VEHICLES
$215.8 240 M88A1

5 ARTILLERY BN EQUIVALENTS
MODERNIZED W/MLRS
44 LNCHRS/72K MISSILES $64.5 Assoc Cost

AMMUNITION
$1484.2 WAR RESERVES
$719.2 TRAINING

SLIDE 6

PURCHASE BY UNIT SETS

In summary, I would like to point out that we think the key to this year's budget is buying by unit sets. When we buy tanks, for example, it does us no good to buy 840 tanks if we don't buy 60 days of ammunition to go with those tanks, and if we don't buy 10-ton ammunition trucks, fuel trucks, and the test equipment that goes into that battalion to make it effective.

AH-64 ATTACK HELICOPTER

For example, if you look at this year's budget, you will find the AH-64 Apache attack helicopters will give us the equivalency of eight attack helicopter battalions. We have none of these in the Active Force today. We are just beginning to field them this year.

We will have 15 armored battalion equivalents. That is tank battalions in our heavy divisions and cavalry squadron of armored cavalry regiments.

Finally, we will have 12 mechanized infantry battalions added in our heavy divisions. A lot of people look at this and say we are forgetting about the support equipment we need. I emphasize we also are looking at buying many wheeled vehicles and modernizing our fleet.

Three years ago, for example, we had trucks that were older than the average drivers that were driving them. Today we are fielding new vehicles in large numbers.

With your support we believe we can continue this modernization of the Army and give you the effective Army you desire.

We are now ready for your questions.

Senator RUDMAN. Thank you very much, General Wagner.

I am going to ask a few questions and then I am going to have to leave. Senator Andrews will chair the hearings until Senator Stevens arrives.

TESTS ON DIVAD SYSTEM

I was interested in a comment you made during your presentation about the Sergeant York, the Divad system. I think you said the tests were going very well.

Which tests are you referring to?

I am familiar with the testing program now going on, the enormous resources which I agree with.

To what essentially were you directing that comment?

General WAGNER. Right now we are well along with what we call the initial production test. This is an engineering test, checking to see that the system meets its specifications.

In other words, does it engage the targets in the proper time? Does it show the reliability that it should show?

We also have a follow-on evaluation which is a user test. This is being conducted at Fort Hunter-Liggett in California and Fort Bliss in Texas. We have completed the force-on-force phase of that test.

Out at Fort Hunter-Liggett we are testing a unit from the Second Armored Division, equipped with the Sergeant York and opposed by the closest surrogates we can get to simulate Soviet equipment, including helicopters and fixed wing aircraft. We have fought that battle in a benign environment and in the high EMC threat environment that we expect to meet on the battlefield.

It is doing well on all of those.

LIVE FIRING SESSIONS

Senator RUDMAN. These are all with electronic sensors? It is my understanding that the actual live firing tests are taking place sometime later this month, over a 3-day period, at Fort Hunter-Liggett?

General WAGNER. No, sir. Those live firing tests at full scale droned aircraft, both fixed wing and helicopters, will be on Red Reo Range at White Sands, NM.

Senator RUDMAN. What are the dates of those?

General WAGNER. I believe it starts the middle of this month and will end at the end of the month. The principal firing is to start about the 18th of this month. In fact, members of both the Senate and House of Representatives and their staffs are going down to observe those firings.

What we have run at Fort Hunter-Liggett is a highly instrumented test, force on force, not live firing, to engage targets that are all friendly, but we do, with accurate laser devices and things of that nature, have the capability of determining what our hit probability is, and the effectiveness on the battlefield.

EMERGING IPT RESULTS - AS OF 25 APR 85

- DETECTION OF INGRESSING FIXED-WING AND HELICOPTER TARGETS LOOKS GOOD.
- IFF IS PERFORMING BETTER THAN SPECIFICATION (100%).
- RADAR AND OPTICAL TRACKING ACCURACIES ARE BETTER THAN THE SPECIFICATION.
- GROUND FIRING HIT PROBABILITY GOOD AGAINST STATIONARY TARGETS - LESS THAN EXPECTED FOR MOVING TARGETS AT LONGER RANGES.
- FIXED WING REACTION TIME 1.2 SECONDS GREATER THAN 8 SECOND REQUIREMENT.
- HOVERING HELICOPTER REACTION TIME 2 SECONDS GREATER THAN REQUIREMENT AT 4 KM;
    - REACTION TIME IS LESS THAN 8 SECOND REQUIREMENT AT ALL RANGES 3 KM AND LESS
- ARM FALSE RATE EXCEEDS SPECIFICATION.
- FALSE TARGET RATE EXCEEDS SPECIFICATION.

SLIDE 7

WEAPON SYSTEM CONTACTS

To give you an idea of what is going on in the initial product test, you can see we are doing very well detecting the ingress of fixed-wing helicopter targets out to the full capability of the system.

I can't tell you the exact detection range in open session, but it is out to the full desired capability. We have been able to engage those targets at least one kilometer farther than what our specification requires.

We are doing very well in a majority of the areas. You can see here on the reaction time that it is about 1.2 seconds greater than the specs requirement of 8 seconds.

I would point out to you that this particular test calls for the vehicle to have the gun turned 180 degrees away from the ingressing target. After his radar picks it up, he has to come around, lock on it, and engage it within eight seconds. We have been able to do that on both the fixed wing and rotary wing aircraft in about 9 seconds.

All of the tests that we have run to date and the war games we have run show if we can accomplish that in about 16 seconds, we are going to be successful.

There is one area we have not met our expectations. That is in power and actuation. The principal problem we have had there, and we are only about a third of the specification, are hydraulic leaks in the system. When we have fixed them, we have had no recurrences.

Because of the fact that when you test it, you count every failure from beginning to end and cannot apply the fix in this IPT, we can't raise the number to where we would like for it to be. However, many of the fixes we have put in the systems out at Fort Hunter-Liggett have not failed again.

Senator RUDMAN. How about the last two points on that chart?

General WAGNER. The false rate exceeds the specification. What this means is that when an anti-radiation missile comes in, the radar shuts down. It is shutting down properly, but it is coming up several seconds later than we would like.

In other words, as soon as it passes, we would like to have it pop right up. It is taking 3 or 4 seconds longer.

Senator RUDMAN. How about the last one?

General WAGNER. We would like to have only about one false target every 3 minutes. We are getting that about every 2 minutes. A skilled operator does not have a problem with that. In every engagement at Fort Hunter-Liggett he was able to determine which was the false target and which was the actual target from looking at his radar screen.

It has no effect if you are using the optical system because then he sees them.

AVAILABLE TARGETS

Senator RUDMAN. I understand that, in addition, the live firing will be against helicopters that you have dedicated to this test program.

How many targets are you going to have?

General WAGNER. I believe it is six. I will have to provide that for the record.

[The information follows:]

DIVAD TEST TARGETS

Current plans call for SGT YORK to engage twelve aerial targets targets. Six targets are fixed wing jet aircraft and six are helicopters. Each target will be equipped with a drone flight control system and designated QUH-1 (UH-1 Huey), or QF-100 (F-100 Super Saber).

DRONE AIRCRAFT

General WAGNER. They will shoot at UH-1 drone helicopters and at least six F-100 drone fighter aircraft. They will engage these at ranges from in excess of four kilometers into the closest range of 2.5 kilometers.

Senator RUDMAN. It is my understanding that the program for flying these drones is going to be done extremely realistically, they are not going to fly straight line, we are going to simulate the kind of basic tactics that any helicopter pilot, who wants to save his neck, would actually do if he was coming in on an area that he knew was fortified.

General WAGNER. Yes, sir, we looked long and hard at the best place for the test. We have chosen a place to make it as difficult as possible for the Sergeant York. For example, there is a hill mass that they will fly in front of, which means they will have to pick the target out of the clutter of the background.

It is easy to pick him out of blue sky. It is more difficult to pick him out of the cluttered background. They will fly behind hills and they will be exposed for various intervals.

Senator RUDMAN. That was one of the major problems with the test results.

General WAGNER. Yes, sir. There is one problem with helicopters. We cannot hover a helicopter drone perfectly still. We can get pretty close where it is coming in at only 20 meters per second, fairly slow, but we can't stop it out there and hold it in the hover with the drone system we have today.

But we are having them come straight so that it appears almost as a hover to the gun. We are doing the best we can on that.

M72A4 LAW

Senator RUDMAN. Let me ask you about the problems you had with the tests on the M72A4 LAW. I understand you have moved some money ahead on that. There was supposed to be competition between the M72A4 and the Swedish AT4 system to be manufactured by an American manufacturer.

I understand there have been some failures with that. You moved some money ahead and had not asked for it in this appropriation.

Is that correct?

General WAGNER. There has been one failure on the M-72 improved LAW.

The AT4 testing has finished. We have not made a final decision whether to buy a mix of the two, or one or the other. That decision will be made in August relative to the AT4. A decision on the M72E4 has been postponed until the second quarter of 1986.

Senator RUDMAN. Our understanding is that you are going to give up $42 million that was appropriated for fiscal year 1985 and that $42 million we can allocate to fiscal year 1986.

Is that correct or incorrect?

General WAGNER. No, sir. We will be making a decision in August relative to the AT4 and will need that money if we choose to buy the AT4.

Senator RUDMAN. I want to tell you, I think you had better talk to your friends at OSD. I think mother has given away something that the children don't know about.

General WAGNER. That is possible.

Senator RUDMAN. I would like you to check into that.

General WAGNER. I believe I understand what it is now. It is probably moving the dollars forward that have not been obligated up to this time.

Senator RUDMAN. As you know, the Senate budget that was adopted puts growth at zero plus inflation. The House will tell you zero minus inflation.

I assume—although I think that the Department of Defense is extraordinarily skilled doing things with mirrors—I think it will take more than mirrors to get to that number. I would like you to check that.

General WAGNER. I will. I will get back to you on that.

VULCAN AND DIVAD SYSTEMS

Senator RUDMAN. What are you doing with the other forward end systems? What are your plans for the current Vulcan, Divad, and some of the other things you have been working with in the event you had some unforeseen failure with Sergeant York?

General WAGNER. First of all, we have in our program now the Divad which is an improved Vulcan, but it still does not give us the range we need on the battlefield and necessary survivability.

If we continue to buy the Sergeant York which we hope to do after coming back to you in September, they will be going into our National Guard forces.

We are also testing some alternate systems, Chaparral, for example, and a laser beam rider system, and a hybrid (gun/missile) system which could be quickly fielded. Chaparral could be fielded quickly, but no improved gun system could be fielded in the near term bcause it takes a lot more design work.

We have a complete air defense program to modernize our forces to include the National Guard. It includes something we call pedestal-mounted Stinger which will mount Stingers on a mobile chassis so that we can move them about the battlefield rapidly and a better acquisition capability.

BRADLEY FIGHTING VEHICLE

Senator RUDMAN. I was just curious. There was some discussion last year with General Kenyon and other discussions with the Chief, of thickening air defense generally on the battlefield by taking a certain number of Bradleys and proving their capability. We know from the Vietnam experience, the North Vietnamese and Vietcong had great success against our helicopters, in many cases, light infantry because of the fragile nature of helicopters.

There was some discussion about thickening battlefield defenses by putting a certain number of weapons and improved aiming system on the Bradleys. You might not have the attack come where Divad happened to be sitting.

Is there any money being appropriated?

It is a low budget item.

General WAGNER. There is a minor modification of the sighting system which we are putting on the Bradley that will help in an air defense engagement. The rate of fire is slow, but, as you say, in many cases if you can throw up a wall of fire, even if it does not shoot the helicopters down, it drives them off.

COMPUTER-EQUIPPED BRADLEY'S

Senator RUDMAN. The Army, I take it, had put aside its interest last year of possibly putting a computer on some of those Bradleys, upgrading the weapon itself and possibly a very simplified quadrant alert radar?

General WAGNER. We have no plans to do that. I would not say, however, we are not still looking at that, sir. We just need a higher rate of fire to do much good.

Senator RUDMAN. It seems to me that there were a great number of Bradleys that would be on the battlefield compared to the air defense systems we have and helicopters are a major threat and for a relatively small amount of money compared to what Bradley costs with all the support systems for it. You could have a quantum leap for air defense, not that it would meet the kind of specifications you have for Divad, but it might be in the right place at the right time.

I am going to have to leave at this point. I yield to my friend, Senator Proxmire.

I will ask Senator Andrews if he will chair the hearing until Mr. Stevens arrives.

I will have other questions for the record.

General WAGNER. Yes, sir.

Senator PROXMIRE. Thank you, Mr. Chairman.

MODERNIZATION COSTS

Secretary Sculley and General Register and General Wagner, I have great admiration and respect for you gentlemen. I think you have made a fine presentation. As you know, the name of the game for this committee is money. That is our job. Our job is to determine the extent to which we can provide the resources you are asking for.

I am very, very concerned about the fact that modernization is one thing and I am all for it, we need the highest possible quality weapons, but we have to keep an eye on the cost and what we have to pay for this modernization.

TANK COSTS

For instance, the Congressional Budget Office noted that in the last 4 years the dollars for tanks are up 147 percent, the number of tanks up only 30 percent.

Why is it that we can't seem to hold down the burgeoning cost of acquisition? Why is it we don't seem to be getting the numbers that we so urgently need?

Mr. SCULLEY. I would have to disagree. I have not read the specific item from the Congressional Budget Office, but I do know that in the very broad sense as reflected in our systems acquisition report to the Department of Defense and then Defense to the Congress, that cost growth has not been a major problem in the last 4 years with the major weapon systems in the Army.

That has not come easy. It has come from what I feel is much better discipline in the mangement of these systems. We don't have what I feel were the obscene stories of rampant cost growth.

ABRAMS TANK

Senator PROXMIRE. Haven't we had a colossal increase in the cost, for instance, of the Abrams tank? Has that not gone from $700,000 a copy to $3 million a copy or more?

Mr. SCULLEY. In one way of measuring it. If I may make the point, sir, the $700,000 figure, if I recall, was a 1972 figure based on the recurring cost of producing a tank, the driveaway cost, and in fact the $3 million cost is what we call a programmed unit acquisition cost that includes the research and development, the inflation, any engineering changes.

It is certainly one way of looking at it, but I do not feel that it accurately——

Senator **PROXMIRE**. I ask that the figures be put in constant dollars. I realize there may be other considerations.

[The information follows:]

ABRAMS TANK PROGRAM UNIT COST GROWTH

Majority of the reports of the M1 costs growth have been misleading. The problem stems from comparing base year cost data in constant dollars to that of escalated dollars which includes program changes. To illustrate the problem of cost comparisons, and to show how to obtain proper comparison we have used the December 1983 SAR for the M1 Abrams Tank. The December 1983 SAR was used because it was the last formal report submitted to Congress which fully explains the cost comparisons. The following excerpt reflects the various costs in FY72 constant dollars compared to that of FY85 current dollars:

	Unit cost fiscal year 1972 constant	Unit cost fiscal year 1985
Unit hardware cost	$581.2	$1878.2
Rollaway unit cost	627.1	2027.8
Weapon system cost	752.8	2432.8
Procurement unit cost	783.8	2533.0
Program acquisition unit cost	875.3	2773.7

Allegedly, the cost of the Abrams Tank grew from the FY72 estimate of $752.8 to that of approximately $3 million a copy or more. The Abrams excerpt of the December 1983 SAR reflect that the Weapon system cost in FY72 constant dollars show that when compared to the Program Acquisition Unit Cost in escalated FY85 dollars, the cost does, in fact, reflect a significant increase. However, the comparison does not accurately reflect the correct cost comparison. To understand the various unit costs, one must understand the composition of what constitutes each of the cost elements. Hardware cost is defined as the cost only to manufacture the product. Rollaway Unit Costs includes hardware unit cost, initial production facilities, and first destination transportation. Weapons System cost includes rollaway cost plus production base support, peculiar support items, and integrated logistics support. Procurement Unit Cost includes, in addition to the Weapon system cost, initial spares and modification work orders. Whereas the Program Acquisition Unit Cost includes the procurement unit cost, RDTE and military construction. Therefore, when comparing the type of cost, one must selectively compare similar unit costs either in constant or escalated dollars. When development of the M1 began in 1972, Congress accepted a design to unit hardware production cost of $507.8K in 1972 dollars. This goal was based on hardware unit cost rather than rollaway cost for a quantity of 3312 vehicles built over a period of 10 years at 30 per month rate. The cost in December 1983 SAR were based on a 90 per month rate and 7058 quantity per OSD guidance and include several program structure modifications since the original DTUHC Goal was established in Dec 1971. Included within these changes are a multi-facility production operation, a 120mm system integration effort and a major Block Improvement effort. The December 1983 SAR reports the hardware unit cost at $581.2K in FY72 constant dollars.

M1A1

General **WAGNER**. One item that has driven the tank up over $200,000 in this year's budget from the past is the fact that we are now fielding the M1A1 which is an improved tank compared to the one that we orginally started fielding.

It has a 120-millimeter gun on it to give it greater capability, it has an overpressure CBR defense system and it has other improvements that I can discuss with you in closed session.

Senator **PROXMIRE**. That is very, very encouraging. I am all for that. Again and again we hear of the improvements. That is good. I would like to get that.

What we should hear, it seems to me, is where the economies are. I would love for once to have a general or Secretary of Defense come up and tell us that here is a weapon system we got that is going to cost less, it is going to do as good a job or better, but it will not cost as much.

We never seem to do that. That is one of the ways we sell products in our very productive and competitive free enterprise system, but you can't seem to do it somehow with your procurement.

You have a marvelous vocabulary. I have heard of address, redress and progress, but never ingress. That is a new term. I thought I was kind of stupid. So, I asked the staff and they had never heard of it either.

General **Wagner**. That means it is flying toward you.

Senator **Proxmire**. Why don't you say that?

General **Wagner**. Yes, sir. It is common in military service.

Senator **Proxmire**. I never heard of it before.

General **Wagner**. When an air defender is speaking of that, they say it is an ingressing aircraft as opposed to egressing, but I will say coming at you.

Senator **Proxmire**. I like coming at you.

CH-47D HELICOPTER

The Army recently grounded 63 CH-47D helicopters last week after one of the helicopter's transmission bearings failed on April 23.

What is the status of these helicopters at the moment? What is being done to correct it?

General **Register**. The helicopters are still grounded at this time. Investigation has not been completed. We have moved the transmission—it was a component within the transmission that was suspected to be faulty—we have moved it along with four additional transmissions back to the factory.

Those are being reviewed. We will retain them grounded until we find the exact cause. The Army has taken a very serious approach to safety. If we have erred, we have erred on the side of safety. Those aircraft could be flown if emergency required it.

BLACKHAWK HELICOPTER

Senator **Proxmire**. Let me ask you about the Blackhawk.

In April, the Army grounded about 630 UH60 Blackhawk helicopters after 2 weeks of fatal crashes. Since 1981, the UH60 has had 23 crashes.

Why didn't we ground the helicopters earlier? Why did we take so long?

General **Wagner**. The majority of those crashes, sir, were pilot error. They were not failures in the system itself. There were extensive reviews conducted on every one of these crashes. If there had been an inherent deficiency in the helicopter, we would have grounded them.

Senator **Proxmire**. You say the majority, 13 of the 23?

General **Wagner**. Over 50 percent.

Senator **Proxmire**. That still leaves a number that were not pilot error.

PILOT TRAINING

What have you done about training your pilot so that you won't have that high a number of crashes?

General **Wagner**. The entire pilot training program is constantly being upgraded to try to correct that. We do fly in an environment that is much more difficult than we did in the past. For example, today we fly them primarily in the nap of the earth mode among the trees.

We do that during the day and we do that at night. We are increasing the flying hours in units and we are increasing the hours in the training base. Finally we are taking corrective action against those pilots that in some cases deliberately fly out of the envelope, knowing they are doing something wrong.

GROUNDING OF UH60

Senator **Proxmire**. How long do you expect the grounding to last? You grounded them in April.

General **Register**. I don't have the exact date. We have a general officer who is a former project manager in the helicopter program who is overviewing the total review of the aviation program for the UH60. They are looking at training, looking at maintenance and maintenance training, and maintenance procedures.

The safety investigation is still ongoing, so the results of that have not been revealed as yet. We will maintain those aircraft during this particular period and probably, based on the results of the final investigation and the technical solution to that problem, will raise those aircraft on a phased basis.

I think it will be several months. That is the best estimate I can give you right now.

Mr. **Sculley**. In a very broad sense, Senator Proxmire, the fleet will remain grounded until the fix is developed, adequately tested and applied. That is difficult to speculate upon.

Senator **Proxmire**. Will you give us the details on the increase in the flying hours? We have some problems with that statement.

[The information follows:]

Flying Hours

The 1985 Flying Hour Program is 1.79M hours, which has been increased to 1.91M hours for 1986. This is an increase of approximately 120K hours. This translates into an increase in the UH-60 (Blackhawk) average aviation crew operating tempo of 2.5 hours per crew per month for the combat forces. The fiscal year 1985 resource position is 16.5 hours per crew per month. The fiscal year 1986 UH-60 operating tempo is projected to be 19.0 hours per crew per month. Additionally, the UH-60 flight training hours for aircraft qualification has increased by 13.5 hours—from 11.5 hours 25.0 hours per student. With this increase in initial training and sustainment in the field, we believe that our pilots will be better trained and thus reduce the probability of accidents due to pilot error.

PERSHING II ACCIDENT IN GERMANY

Senator **Proxmire**. Can you give us background on the Pershing II accident in Germany? What was the cause of the accident where the missile blew up?

General **Wagner**. The cause was a static electricity discharge as far as we can tell from a rigorous investigation. We have made modifications to that missile to correct it and also have improved the grounding system.

ARMY TRUCK SHORTAGE

Senator **PROXMIRE**. General Wagner, you mentioned a shortage of Army trucks. You have cut back on your buy of 5-ton and 10-ton trucks for 1986 compared to 1985.

Why is that?

General **WAGNER**. Part of that resulted when we tried to put together a balanced budget to get the trucks, for example, the 10-ton trucks to go with the heavy battalions that were being fielded. We felt that was the right number to buy.

Also, we are looking at competing the engine. We will test it, run them for about 20,000 miles in a test and will go on a multiyear contract.

Senator **PROXMIRE**. My time is up, but it does seem to be a contradiction here. You say you are short of trucks and you are cutting back on them.

General **WAGNER**. Unfortunately, we are short of almost everything. I think we are doing a much better job now than we have done in the past in trying to make balanced buys so that we get the right number of trucks to go with the other equipment so that we modernize the entire unit instead of just a piece of that unit.

Senator **PROXMIRE**. Thank you.

Thank you, Mr. Chairman.

Senator **ANDREWS** [presiding]. Thank you.

NEW AND IMPROVED SYSTEMS TO ARMY GUARD AND RESERVE

In your statement, Mr. Secretary, you say that the Guard and Army Reserve units are receiving and will continue to receive new and improved systems as part of the total force.

The last time I had figures on it, the units had only 32 percent of the equipment on hand. Years ago they were trying to teach me you weren't combat ready unless you had 125 percent of the equipment on hand.

Are those percentage figures changing or is this just rhetoric?

Mr. **SCULLEY**. I honestly feel that it is not rhetoric; that our Secretary, Secretary Marsh, having been a member of the National Guard, appreciates the contribution that the Guard and Army Reserve can make to the total Army.

Each year that I have been a part of the team I have seen more and more equipment moving directly to those Reserve components. Many of them are round-out components for divisions to be deployed to Europe. I think it is far more than rhetoric.

I feel, to emphasize the point that General Wagner made, we are short in our active components as well as our Guard and Reserve components for equipment.

Senator **ANDREWS**. The point is if it is more than rhetoric, what we need are percentage figures.

Do the Guard and Reserve units have 60, 70, 80 percent of the equipment on hand they need to be combat ready, or what?

General **WAGNER**. Sir, those units that are early deploying are the first ones to get priority. Those round-out units that deploy with an M1 unit today have M1 tanks. We made a move in the last couple of years to modernize them.

For example, we have accelerated the modernization of all of the tank forces that do not have M1 with the M60A3's which they were not scheduled to get in the past. They will now complete this transition by 1991.

We also are moving out the UN1M, which is a nondeployable attack helicopter. We have increased the number of AH-15 attack helicopters we are putting in the units.

The specific percentage I will have to provide you. We have in this year's program about $1.3 billion to put in the Reserves.

[The information follows:]

Equipping the Reserve Components

Increasing the equipment fill in the Army National Guard (ARNG) and Army Reserve (USAR) remains one of the goals to which the Army is firmly committed. Over $900 million in equipment such as M60A3 tanks, UH-60 helicopters and CHAPARRALS were issued to RC units in FY 84. At the end of FY 84, the ARNG and the USAR were equipped at 61 and 52 percent of their wartime requirement, respectively.

PERCENTAGE OF EQUIPMENT IN GUARD AND RESERVE

Senator **Andrews**. The point is that we have to adapt what we do in this committee to what the Budget Committee gives us and all of the rest.

If those figures are still at 32 percent, and that is across-the-board figures, and I don't remember offhand what your table of organization shows, the number of tanks you have to have in a given unit to be combat ready, but if you are that far down, it appears to this member of the committee and some of the other members of the committee that the time has come to start phasing out, closing down the active units of the Army and get some of this equipment passed around so that the Guard is more ready to go.

There is no sense having Guard units and active units that have half the weapons they need to become combat ready, personnel costs are half this budget or close to that. We continue to get fudge figures that indicate that these units are only half ready.

If we get rid of half the personnel, we would still have the number of weapon systems manned as we have now and we would save a significant sum of money.

If you don't have at the tip of your tongue what percentage of equipment you have on hand in the Guard and Reserves, after mentioned they are going to continue to receive improved systems, will you provide that for the record? It will be a help.

General **Wagner**. Yes, sir. That 32 percent, I am pretty sure, is based on total modernized equipment.

If we have a single deficiency in the Guard, it is in our air defense units. That is another area where we are trying to speed up their modernization. There is no question that they have antique equipment and we are bringing up to date most of their maneuver battalions.

Senator **Andrews**. The figure we were given was 32 percent across the board. In a sense, from the nose of your face right now, you indicate that is approximately correct.

Then you added one other horror story when you mentioned that some of your regular units aren't adequately equipped either.

WEAPONS/MANPOWER BALANCE

You know, as Senator Rudman points out so well, the tooth-to-tail ratio is getting ridiculous if we are paying for personnel that are going to stand out there with their bare hands and say, "Stop," hopefully. It is better that we concentrate on balancing manpower with the weapons we have and save enough money so that we can put muscle in where it has to be put in.

General WAGNER. That is exactly what we have done. That is one reason that our Chief of Staff and our Secretary have decided that the Army is not going to increase in size. We are going to stay at about 781,000 so that we can afford to modernize the Army and give them the sustainment capability they need.

We have had a tremendous increase in both the modernization of our Army with new systems, both Reserve and Active Forces, and also in the days of supply that we have available to fight on the battlefield in the last 5 years.

With your support, we will continue that.

RELIABILITY AND MAINTAINABILITY

Senator ANDREWS. Another thing—the Air Force when they appeared before this subcommittee indicated that they would have a fourth leg of cost schedule and performance drivers of military procurements. I will now read in their language, "plus schedule performance and reliability and maintainability."

The Senator from Wisconsin asked some pretty pertinent questions about reliability and performance and maintainability.

The Navy also mentioned how warranties were increasing reliability and maintainability in cutting costs on weapons.

Can we expect similar developments in the procurement of weapons to be used by the Army?

Are you adding that leg of maintainability and reliability as well?

General WAGNER. Yes, sir. In fact, we had warranties on many of our systems before the law was even passed. We support it completely. We are increasing that number. In some cases it is more cost effective to have it, as you know, on individual components of a system rather than on the entire system.

For example, on the AH-64 this year, in addition to those warranties we have on components, we have an overall warranty on the entire aircraft.

Senator ANDREWS. DOD put out draft guidance for when the warranty law went into effect on January 1. I believe that there are some serious shortcomings and problems with the guidance.

Have you submitted a response to that guidance?

Mr. SCULLEY. Yes, sir; we have.

Senator ANDREWS. Could you provide a copy for the record?

Mr. SCULLEY. I will be happy to do that, Senator Andrews.

[The information follows:]

DOD WARRANTY GUIDANCE

The Army has a representative on the Defense Acquisition Regulation (DAR) warranty subcommittee and the DAR council. These representatives presented the Army comments to their respective committee and council meetings. The Army comments on the draft guidance are as follows:

The Defense Federal Acquisition Regulation Supplement (DFARS) guidance at subpart 46.770 should expressly state whether warranties must be obtained when acquiring subsystems, components, and/or spare parts and repair parts for weapon systems.

DFARS 46.702(e) permits the warranty acquisition cost to be included as part of the item's price or to be set forth in a separate line item. When using formal advertising (sealed bids) or competitive negotiations the warranty acquisition price is included in the system price. Therefore, the cost data, which would reveal the cost attributable to the warranty, is not available. DFARS should state whether price analysis at the system level is sufficient to determine whether the warranty is cost effective under DFARS 46.770-8.

In DFARS 46.770.1, the terms "at no increase in target price" and "at no increase in estimated cost" should be clarified to state clearly whether the Government is to pay warranty costs incurred by the contractor above target or estimated cost.

The definition of a Weapon System is too broad. Go back to the language in law. The laundry list of items should be eliminated. Terms have widely varied meanings among the services. The Law is adequate, services can interpret themselves.

DFARS 46.770-2(a)(2)(i) provides for the remedy "corrective action". The previous Office of the Secretary of Defense (OSD) guidance (para 5(b)) and section 794 permitted warranties with remedies that did not include any re-design liability in regard to performance failures. Consideration should be given as to whether or when warranties of esential performance requirements should include re-design remedies.

The second to last sentence in DFARS 46.770-3, tailoring, advises that the scope of the warranty may be narrowed; for example, where it would be inequitable to require a warranty of all essential performance requirements because a contractor has not designed the system. This should be clarified to state whether this is authority for omitting a performance warranty when contracting with a non-developer or non-designer.

- 46.770-8 - Require cost/benefit analysis to be performed for every warranty.
- 46.770-9 (a) delete. Insert definition from 10 USC 139 (a).

The warranty clauses at Federal Acquisition Regulation (FAR) 52.246-17 and 52.246-18, modified to include design, and FAR 52.246-19 should be reviewed to determined if their use would comply with the warranty law.

The warranty guidance issued to date needs improvement in the following areas:

- definition of a weapon system.
- definition of the phrase "eventual total procurement cost"

used in the statutory definition of a weapon system.

- the distinction between a warranty of the "design and manufacturing requirements" and a warranty of "freedom from defects in materials and workmanship".
- whether and in what circumstances spares and repairs are subject to the warranty requirements.
- whether and when re-design liability is to be imposed on a contractor under the performance requirements warranty? The legislative history indicates that a factor to be considered in crafting a warranty is the extent to which the contractor designed the system.
- whether in a competitive negotiated acquisition where the price is:
  - based on adequate price competition.
  - based on established catalog or market prices of commercial items sold in substantial quantities to the general public,
  - set by law or regulation (see FAR 15.804-3), the price reasonableness determination is sufficient to determine the cost effectiveness of a warranty.
- whether in negotiated acquisitions where certified cost or pricing data is required in accordance with FAR 15.804, such cost data must include detailed cost data on the warranty and whether such warranty cost data must be subject to an audit and cost analysis.

What are the types of performance requirements that should be designated by the Head of the Contracting Activity as essential and warranted by contractors. For example, first article tests and acceptance tests should not be warranted performance requirements.

The last sentence of DFARSs 46.703 should be deleted. It is a superfluous statement. The acquisition of a warranty on a system is governed by FAR 46.7. The warranty clauses in the FAR would seem to be adequate.

- The DFARS 46.770-7, Foreign Military Sales (FMS), appears to be internally inconsistent by stating DoD policy and then by stating that the policy will apply if the FMS purchaser request a warranty in the LOA:
  - "It is the policy of the Department of Defense to obtain for FMS purchasers the same warranties against defects in workmanship and material and conformance to design and mnaufacturing requirements as is obtained by the United States for similar purposes."
  - "If the FMS purchaser requests a warranty in the Letter of Acceptance (LOA), the United States shall obtain the same warranties on conformance to design and manufacturing requirements and against defects in material and workmanship that are obtained for U.S. supplies."
  - thus, it is not clear if it is DoD policy to obtain the two warranties for the FMS purchaser, or if the U.S. obtains them or if the U.S. obtains them and the FMS purchaser requests them in the LOA.

WARRANTY COSTS

Senator ANDREWS. Army policy we understand is that warranty costs are not to exceed 2 percent of cost.

How is that working?

Mr. SCULLEY. I think it is a very reasonable guideline. I am glad you recognize, sir, that warranties are not free.

Senator ANDREWS. Now, that is an interesting statement, warranties are not free. Let us say it costs you $10 million to buy a dozen weapon X's. If you get them so that the manufacturer says they will work, it costs $11 million.

Do you really want to spend $10 million to get a dozen weapons that the guy makes and won't say it will work? What is the bargain in that.

Mr. SCULLEY. There is no bargain in that. I would only add that there are other mechanisms besides an explicit warranty to guarantee the performance through contractual instruments of weapon systems. I support wholeheartedly the emphasis on reliability and maintainability.

It is the policy of the Army that we will look for improvements in reliability and maintainability even before we will look for improvement in performance. The message, I think, has been clearly conveyed to each and every project and product manager in the Army as a way that we are going to do business, that they are to emphasize that.

Senator ANDREWS. The warranty on reliability and maintenance is one to protect you. The reliability on performance is probably more one to protect us, in esssence, the bankers to you, the military, because you come up over the years, not you, your predecessor, with all these stories about how weapon X can do such and so.

Committees preceding this committee have gone along with that only to find that the performance you say would be given simply isn't there. Now in these times of tight budgets—God knows we have always been in tight budget times, but these times demand even more than prior times did. That we have some way of knowing for sure that a weapon is going to do what you say it will do.

General WAGNER. A good example is the current contract we have on Sergeant York where the contractor is required to fix those deficiencies that do not meet the specifications before they are fielded.

Our 10-ton trucks that we had axle problems with have to be fixed by Oshkosh before they will be delivered to us. They are fixing those right now.

I think going along the line of what you recommended and what Mr. Proxmire talked about earlier, would be to look at what we are doing on the M1 program. When they come in from the field, that is, the user and the developer, with recommendations to improve the M1s performance, with what we call product improvements, we are now requiring that they come in as close as possible within operational cost by giving it more reliability.

In fact, when they came in and gave a briefing recently to the leadership of the Army, they were sent back and told that they must come back with those types of offsets before they were going to get approval of any improvements in the performance of the tank.

Senator **Andrews**. Can you provide for the record how the Army is going about implementing the warranty law, any special task forces you have, any special directives, contract authorities and any efforts for joint service cooperation?

General **Wagner**. Yes, sir.

[The information follows:]

WARRANTY IMPLEMENTATION

The Army supports warranties and has been acquiring them for a number of years. While warranties are not new to the Army, as a result of the warranty law the program has expanded considerably.

In the policy arena, AR 702-13, The Army Warranty Program, is being revised significantly to accommodate the new law. The revised regulation applies to the retail and the wholesale communities and a draft has been provided to the field for review and comment. The revised regulation should be published late FY 85. The Deputy Chief of Staff for Logistics has issued interim guidance messages pending regulation publication.

Additional initiatives are: establishment of warranty control offices throughout the Army system; creating an automated data base; publication of the "Warranty Highlighter" a quarterly warranty newsletter; establishment of a warranty hotline to provide quick responses to inquiries from the field.

The Army Material Command (AMC) has been designated as the lead action agency to develop the Army program. AMC has already issued two policy directives: one concerning claim procedures and the other concerning warranty costs.

The aspect of joint service cooperation has been emphasized by the Army through participation, along with the Navy, in the Air Force's Product Performance Agreement Center at Wright Patterson AFB, OH.

SUBMITTED QUESTIONS

Senator **Andrews**. Thank you, Mr. Chairman.

Senator **Stevens**. Thank you.

I appreciate your coming.

Senator Sasser.

Senator **Sasser**. Thank you, Mr. Chairman.

I was unable to attend two meetings of the committee yesterday as a result of the terrible air service. I wanted the Senator from North Dakota to hear this so that perhaps we can have his Transportation Subcommittee address this problem.

In any case, I have some questions for the record relative to yesterday's hearing which I will submit.

Senator **Stevens**. One of those was closed. You want to put them in the record of those two hearings; is the right?

Senator **Sasser**. Yes.

Senator **Stevens**. Not this hearing?

Senator **Sasser**. Not this hearing.

Senator **Stevens**. Very well.

Senator **Sasser**. I thank the Chairman.

TILT ROTOR DESIGN

General, we had testimony here a couple weeks ago from the Marine Corps in which they indicated they had chosen the tilt rotor design for their new method of moving their troops as opposed to the conventional rotorcraft technology.

Yet you have chosen to stick with the conventional rotorcraft technology with the LHX helicopters.

Why did you stick with helicopters rather than going with the tilt rotor design that the Marine Corps has?

General WAGNER. Sir, the basic reason we did that is because of the differences in how we are going to use those particular helicopters. The JVX which is the tilt rotor helicopter is going to be operating over longer distances. It is a medium lift helicopter, much larger than we are looking at in our light helicopter, the LHX.

What we are looking for in the LHX is a helicopter that will replace about 7,000 of our current fleet which will average about 30 years of age by the year 2000. This is only about an 8,500-pound gross weight aircraft as opposed to the JVX which may be over 40,000 pounds.

We do intend to procure some of those JVX's when they come out as part of our medium lift and part of our longer leg requirements. But as far as replacing our Scout helicopters, our older attack helicopters, and those Huey helicopters which will not be replaced by larger Blackhawks and we are looking at a cheaper helicopter of modern technology that can do the job. We believe we can develop a cheaper and more effective helicopter by sticking with the conventional rotorcraft.

CONVENTIONAL VERSUS TILT ROTOR AIRCRAFT

Senator SASSER. Conventional rotorcraft is more difficult and complex to maintain than the tilt rotor would be; is that a fair statement?

General WAGNER. I personally would disagree with that, sir, because a tilt rotor is also a complex aircraft and probably as difficult to maintain as a helicopter would be.

Many of the things we are going to put into the LHX are to reduce maintenance. We hope to get down the number of people by about 50 percent.

I spent the day yesterday in an LHX review in St. Louis. We had in the four major helicopter manufacturers in the United States who are studying this in what we call our advanced rotorcraft technology program. They are looking at a single pilot, can they get down operating cost by such things as an all-composite aircraft, improved rotors, and fly by either light or wire instead of flying by hydraulic system and cables as we do today.

All of them are of the view that we can get operating costs down from the current level in this modern aircraft by about 40 percent.

Senator SASSER. That would be encouraging if that could be done.

DIVAD SYSTEM

Let me ask you about the Divad air defense gun which seems to have more than its share of problems.

The Secretary of Defense has directed that this system be put under rigorous test to see if it can indeed perform its assigned mission.

The first of these tests, the follow-on evaluation was conducted, as I understand it, at Fort Hunter-Liggett in California in April.

What were the result of those tests?

General WAGNER. Sir, we discussed this in quite a bit of detail earlier.

I would point out to you that that test was one of a series of tests that are going on right now. It was a force-on-force test to see if it could give the air protection that it was supposed to give to a heavy force on the battlefield. The Sergeant York equipped force was opposed by a surrogate Soviet force to include helicopters, fixed wing aircraft in a benign and jamming environment, and ground attack systems.

The force-on-force phase has been finished. The Sergeant York did very well on that and was able to operate with no difficulty with an armored force on the battlefield.

We are now testing the Vulcan to see how it does under the same circumstances and a Chaparral missile system. That will be completed within about 2 weeks.

Other tests are going to be live firing tests that will be conducted at White Sands Missile Range and also an initial production test that is being conducted in several places to see if Sergeant York is meeting the contract specifications.

In all cases except primarily power and actuation, as I pointed out earlier, it is doing well. We still have some problems there. It is basically hydraulic leaks. The fixes that we have applied to correct those showed up very well and gave us a higher reliability than we really thought we would get out at Hunter-Liggett.

DIVAD TEST RESULTS

Senator SASSER. This Divad gun is to be used principally against helicopters, is it not?

General WAGNER. It will be used against helicopters and fixed wing aircraft. It was tested against both high performance fixed wing aircraft and helicopters.

Senator SASSER. Have you tested it against the Hind 24 gun ship?

General WAGNER. We have tested it against a surrogate, in fact a better surrogate that their Hind because we tested it against our AH-64 Apache which is our newest attack helicopter. We tried to use it in flying the same tactics as the Soviets use.

However, we not only used the same tactics, we gave them the opportunity to change those tactics as the test went on just as we would expect the Soviets would change their tactics as the war went on. The Sergeant York did very well against those surrogates.

DIFFICULTY OF HELICOPTER KILL BY DIVAD

Senator SASSER. There is some question as to whether or not it can lock on and actually kill a helicopter that is flying the knap of the earth technique or using a pop-up technique.

Is there any truth to those statements that we hear that it has difficulty locking on and killing a helicopter using these tactics?

General WAGNER. The test at Hunter-Liggett was the most highly instrumented test we have ever conducted in the U.S. Army. We have used a combination of lasers and multiple computers to determine lead angles, whether they were locked or not locked on helicopters, etc.

All of our indications today are that it did very well. The final test will be the live fire exercise at White Sands where we have taken a piece of terrain that simulates as closely as we can Central Europe where we have a background clutter, not against blue sky. We shoot at both helicopters and fixed wings which will fly in and out of the terrain as best they can to simulate combat. We can actually shoot at them and prove it will shoot them down.

MOBILITY OF DIVAD

Senator SASSER. Now, the gun itself weighs 60 tons, as I understand it, and has a power-to-weight ratio of 12.5 horsepower per ton which is about half the power of the weight ratio of the M-1 tank and also the Bradley fighting vehicle.

Is the gun going to be able to keep up with the armor and the fighting vehicle also on the move?

General WAGNER. Sir, that was one of the major reasons that we ran the test at Fort Hunter-Liggett to see if it could support an armored force on the battlefield.

Incidentally, that Army force had M1 tanks and Bradley fighting vehicles. It was able to support the force.

One must consider the tactics of using the air defense gun to understand why it can keep up. The main reason you need that horsepower-to-weight ratio on the Bradley and Abrams tank is to give them agility on the battlefield, the capability of moving very rapidly from one position to another position to engage the enemy.

The air defense weapons provide an overwatching cover to these particular vehicles so they would normally be about a terrain feature back. Then they can move from position to position to give a covering fire on the battlefield.

It is not necessary for them to have the dash speed of the others. In a road march to move form one area to another you normally march about 20 to 30 miles per hour maximum and it can keep up on those road marches.

It is the same power-to-weight ratio as the M-60 tanks we have in our forces today.

SHOOTING EFFECTIVENESS OF DIVAD

Senator SASSER. I have more than a passing interest in this gun. It is named for Sergeant York of my State. He was a sure shoot. I would like to see at least this gun's reputation improve and get a reputation as a sure shoot.

General WAGNER. I would, too, sir.

Senator SASSER. My time is up.

General WAGNER. If you have an opportunity, we would invite you to come down and see it shoot.

Senator SASSER. I would like to do that. Senator Dixon told me about his experiences and it was not very encouraging.

General WAGNER. I invite you to watch it fired by a trained gunner. I am not inviting you to fire it unless you are willing to spend the time to be trained because it is like any system, you really need to train an individual carefully before you try to engage those types of targets.

Senator SASSER. The problem with the gun was Senator Dixon?

General **Wagner**. With the amount of training he had, I guess he did all right, sir. I would not try to fire it without a lot of training and I am a trained tanker.

Senator **Stevens**. I am sorry to be late. I had a meeting with the Cabinet Secretary. I appreciate that some of the items I was going to go over have already been covered. I do have some of them I would like to cover with you gentlemen.

I understand, Dr. Sculley, that you do have a time problem and we certainly will respect that.

I am told that in 1984, of the deliveries that were scheduled and budgeted, 60 percent of the systems that we had intensely managed because of the funding delivered fewer weapons than were planned. I have several questions.

ACCURACY OF FISCAL YEAR 1986 BUDGET

The first question, of course, is how can we be sure that this budget for 1986 is accurate if we had about 40 percent slippage in the last year as far as fewer weapons are concerned and what are you doing with the excess funds that are not being used, as indicated in our budget briefing in 1984?

We are talking about O&M funds and the overall modernization program and the delivery and deployment of new weapon systems. There has been about $3 billion spent since 1981.

You can tell me if you disagree with it, but that is our information to the committee.

General **Wagner**. Sir, I don't know of any major slippages in our modernization weapon system this year. We had a problem with one of our truck programs. They continue to deliver because they are under warranty and they will be fixed.

But our major fighting systems, tanks, Bradley's, helicopters, all of those are being delivered on schedule. I am not sure exactly what that means.

ITEMS LISTED IN MODERNIZATION PROGRAM

Senator **Stevens**. I have a list here of 28 systems in the modernization program that is entitled "Actual Cost and Quantities Compared to Original Plan and Percentage Change."

The first 11 could be considered to be within the range of delivery planned or planned delivery.

The next 17 or 18 are all off target and they are off target to the extent of about 40 percent on the average.

General **Wagner**. I would have to see that and provide it for the record. I think probably what it amounts to is there were slips if you look at when we planned 3 years ago to field the AH-64, for example. That is on track now. That is probably one of the programs that had slipped.

The Sergeant York, as you well know, has slipped, because we are conducting additional tests on it.

The HEMMT, the 10-ton truck, has completed testing. The axles are being fixed.

I understand now, sir. These are the programs that several years ago, we said we were going to deliver this number and there were some slips in the program.

Patriot was a good example. We ran into problems in testing that. We made the decision that we were going to baseline it not on a date of fielding, but on a milestone schedule when we were sure it was ready to field.

Senator STEVENS. I am not asking about the problems of delay. We funded as part of O&M the schedule for delivery and deployment. That was for taking the completed systems, the completed delivery of the equipment and putting it into the field.

Now, this is money that is part of O&M to deliver the equipment to the field. It is a substantial amount of money. We don't have any indication what is happening to those funds that you are not using.

ADDITIONAL FUNDING FOR DIVAD

We do know in some instances you spent $90 million to prepare fielding the Divad and you are requesting another $70 million now.

Taking into account the delay that has been ordered by the Department itself, why should we provide funding for fielding Divad at this time?

General WAGNER. Sir, I understand your question. I am sorry I did not understand it initially.

Those dollars that were not used to maintain the current system that was out there were in some cases used on other programs.

I will have to provide for the record the exact amount of O&M costs that were appropriated for fielding them and how it was spent. I don't have that available now.

Senator STEVENS. Will you do that?

We have the 10-ton truck, attack helicopters, Stinger, Hellfire missiles, Bradley fighting vehicles, there are several of them where the deliveries are behind schedule, but we funded the deployment in O&M.

General WAGNER. I will provide that for you, sir.

[The information follows:]

O&M COSTS

For FY84, $1299 million was appropriated in OMA for fielding and sustaining force modernization systems. There were, as you indicated, variations in the actual fieldings from the plans on which the budget was based. The Army's major commands adjusted their expenditures throughout the year to comply with the changing fielding plans. Anticipation of some delivery slippages was included in the budget, however, this did not result to the degree estimated and the Army moved $179M OMA from non-force modernization activities into the force modernization program to meet requirements. Execution details of the FY84 program by system follows:

SYSTEM	$M PLAN	$M OBLIGATED	PER CENT OBLIGATED
COMMON ITEMS	14,899	34,547	232
AH-64	48,719	80,331	165
M1-TANK	177,286	174,076	98
MLRS	34,377	27,292	79
TRI-TAC-SWITCHES	24,960	23,314	93
BFVS	72,530	79,536	110
DIVAD	31,850	39,059	123
PATRIOT	83,140	76,807	92
TAC FUSION	7,958	13,492	170
ACE, M9	2,144	2,061	96
AHIP	3,026	7,563	250
CH-47D	29,244	29,460	101
M60A3 TAK	60,954	74,705	123
PERSHING II	39,342	48,560	123
PJH/ADS/JTIDS	1,390	2,019	145
RPV	[illegible]	3,491	[illegible]
BLACKHAWK	109,756	100,275	91
LAV25	1,391	1,308	[illegible]
ROLAND	26,129	[illegible]	[illegible]
MILES	0	[illegible]	[illegible]
STINGER	5,609	[illegible]	[illegible]
IMP GUARD RAIL	7,986	10,485	131
FIRE FINDER	15,682	[illegible]	[illegible]
HEMTT	13,092	[illegible]	[illegible]
LACV-30	5,097	5,312	104
QUICKLOOK	7,095	9,195	130
TAC JAM	3,233	3,844	119
TACFIRE	23,094	25,374	110
AN/TSC-85/93	7,839	6,749	86
TRAMPACK	8,291	7,216	87
TACSATCOM-SCS	5,974	4,910	82
TOW	9,384	11,015	119
EQUATE	8,590	9,588	112
BCS	17,441	18,194	104
COPPERHEAD	968	475	49
CHAP FLIR	4,865	5,786	119
VINSON	6,550	6,638	101
AN/UKC-74	7,145	4,861	68

SYSTEM	$M PLAN	$M OBLIGATED	PER CENT OBLIGATED
AN/TLA-17A	3,483	4,122	118
DAS3	46,448	43,254	93
TACCS	7,868	8,290	105
AN/TAS-5	2,442	1,541	63
GLLD	4,956	4,970	100
I HAWK PIPS	63,345	59,835	94
OH58C	20,865	32,373	155
ITV	22,821	23,352	102
AN/TSQ-73	10,395	15,464	149
AN/TAS-4	7,883	10,174	129
PRC-68	3,384	2,248	66
SINCGARS	1,087	3,050	281
M60A1 (RP)	12,635	29,965	237
QUICKFIX EH-1B	7,838	1,971	25
AH-1S	45,245	69,823	154
M198 HOWITZER	7,485	9,687	129
HMMWV	0	218	0
TRK, M939, (M809)	65,208	61,760	95
DECON XM13	382	97	25
CUCV	35,952	52,392	146
TOTAL	1,299,484	1,478,099	114

For FY 85 $433 million was appropriated in OMA for fielding new systems. Based on the second quarter report, expenditure of these funds for fielding purposes is generally on track. There are, as you indicated, some slippages from the fielding distribution plans the budget was based on; however, delivery slippages of up to a year will, in most cases, result in an obligation of fielding dollars in the budgeted year. This occurs because of the lead time required to have initial repair parts, special tools, test equipment and publications on hand when the end item arrives. Also, anticipation of some delivery slippages is included in the budget. Based on current figures, the force modernization program can be executed as budgeted.

BALLISTIC JTACMS

Senator STEVENS. In our March hearing General Wickham said the Army was going to develop its own ballistic JTACM's. The Air Force is going to deavelop its own launch missile as contribution to that effort.

As we analyze that, that is the first indication we have had that the Army and the Air Force are gong to go their own way in developing a deep strike weapon against second echelon targets.

Are we right?

General WAGNER. Sir, I can't discuss the details of this with you in open session. I would be delighted to discuss it with you in closed session. I can assure you, sir, this is a joint program for that total mission.

The ballistic missile part of it, the JTACM's Army, is an Army-only system for a piece of that mission that the Army will perform.

It is a joint mission to hit the second echelon force [deleted]. To go into the details of the entire joint program, I would have to have a closed session.

CUTS IN JTAC AND JSTARS SYSTEMS

Senator STEVENS. The Senate Armed Services Committee, I am informed, has cut $40 million from JTAC's. The House authorization would terminate JSTARS, which is the Air Force radar system for targeting, JTACM's.

Now, that seems to imply that the House is putting a block to one system and the Senate to the other. Maybe we will have to have a closed session. It looks to me that you have split your efforts in a way that makes both attempts to deal with that concept or second echelon target vulnerable now.

General WAGNER. Sir, we have a balanced program between the Army and the Air Force on this.

Senator STEVENS. Now, a little bit of money from one side and a little bit of money on the other side and both attempts are stalled.

General WAGNER. We have a problem, sir, right. I spoke about JSTARS in my introduction. That is a very critical system to the Army that the Air Force is providing the airborne radar on a dedicated basis to the Army.

That is one program that we are going to strive very hard in joint conference to get back because that is absolutely necessary for us to be able to get the intelligence we need of the enemy movements.

Senator STEVENS. I had a long discussion yesterday with my good friend who is chairman of the Senate Armed Service Committee, Senator Goldwater. We have a similar fear that we have started out with the Senate budget process at such a low level that our compromise with the House is bound to be below a zero real growth.

He understands after a budget compromise, then the authorization compromise, we still have an appropriations level compromise to work out with the House.

AH-64 PRODUCTION COSTS

My next question is to deal with some of those potentials for working out with them the problem. For instance, Dr. Sculley, your AH-64 production is already 2½ months behind schedule as we understand it. You seek $1.2 billion for 144 AH-64s.

What would be the impact on your program if we funded ten months of it rather than 12, in effect told you to take up the slack and we would deal with 120 aircraft rather than 144?

Mr. SCULLEY. I will be happy to provide for the record the precise details in cost.

Senator STEVENS. I know the cost. I know the savings will be $180 million.

Since you are behind anyway—let me put it this way. Is there any indication that in 1985 you will catch up so that you will enter 1986 on schedule as far as the delivery of the AH-64's?

Mr. SCULLEY. That is correct. That is our prognosis. I have avoided program stretchout, especially in this case. They are always costly. It is particularly costly in a manufacturing facility that is a single item manufacturing facility.

Senator STEVENS. This is a stretchout. They are behind already.

Mr. SCULLEY. Army's projections are that they will regain the schedule and be caught up through the fiscal year 1986, that we need the full appropriation.

Senator STEVENS. The question is: Why should you do it? Why not take that savings right there?

The current production rate if it is maintained through 1986 would mean savings of $120 million and you would be as much on schedule at the end of 1986 as you are now.

General WAGNER. From the user's side primarily, sir, we are short attack helicopters. There have been delays in this program, as you pointed out earlier, and we need to get it back on track and get those forces out there.

They give us probably the greatest single capability to rapidly counter enemy threats than anything else we can field today to move quickly from one part of the battlefield to the other. It is the only aircraft we have that gives us a full day and night capability.

We just need to get it fielded as fast as we can. We are working hard to keep it on schedule.

Senator STEVENS. I went down to Huntsville, as you know, and I was very pleased with the briefing we got down there. I must say some of the stuff down there was classified.

RESULTS OF SPARROW-HAWK TESTS

In any event, on the Sparrow-Hawk demonstration program you were making a test when I was down there.

What was the result of that test?

General WAGNER. Sir, that test has been run, I think it was at Yuma, AZ, that we ran it. As far as actually shooting, what they are looking at is putting a standard Sparrow missile on a Hawk launcher to give it a capability to rapidly engage as soon as it pulls into position, to sort of give it a dual capability.

It worked very well. The problem we are looking at now is what is the tradeoff because—again, I can't discuss the details of this in open session, but the range of the Sparrow is about one-half or less than what it is for a Hawk today.

FINANCIAL IMPACT OF SPARROW-HAWK COMBINATION

Senator **Stevens**. What is the financial impact of marrying a Sparrow with a Hawk?

General **Wagner**. It uses the same radar acquisition capability and guidance capability, so it is a relatively cheap fix.

We do not have the number of Hawk missiles we need to counter the threat anyway. So, as far as being able to reduce the number of Hawk missiles, we couldn't reduce them.

Senator **Stevens**. Cost-wise, what is the impact?

General **Wagner**. I will have to provide that because when I became aware of the program, they had not gotten final estimates on what it would take to convert them.

[The information follows:]

Fiscal Year 1986 Army Modernization

The Army Air Defense community has not established a need for the Sparrow/HAWK configuration. No modifications are required to the standard AIM/RIM 7M Sparrow missile in order to deploy and fire it with the HAWK System. Modifications are required to the HAWK launcher. The contractor estimates approximately $142 thousand is required per launcher to upgrade its strength and mobility, thereby permitting either three HAWK missiles or four Sparrow missiles to remain mounted at all times. Currently, HAWK missiles must be removed during launcher displacement, a time consuming and manpower intensive operation. The attachment kit that permits the loading of nine Sparrow missiles has an estimated program cost of $222 thousand, for a total contractor estimate or $364 thousand per dedicated launcher.

A wide range of Sparrow/HAWK missile mixes are possible should the Army adopt the Sparrow/HAWK concept. Accordingly, total program cost would vary with each mix. If all HAWK launchers are upgraded and retained and one launcher per fire unit uses Sparrow missiles, then the total estimated program cost will be approximately $310 million. The cost includes approximately $181 million to purchase 1008 Sparrow missiles.

M1 PRODUCTION RATE

Senator **Stevens**. Your budget tells us that you would like to maintain the 840 production rate for the M-1. You want $2.1 billion for that. I am sure you are familiar with the record as much as I am.

The original request from the Army was for 600. Congress raised it to 720. Then your request is for 720 and Congress raised it to 840. Now you are planning the next budget cycle, which is from 1986 to 1989, to buy at 840 per year.

If we stuck to the original 600 per year buy and took it to 1991 instead of 1989, the cost would be $2 billion less. You would have the same number of tanks, but it would take 2 years longer.

In view of the fact that we are also discussing that once we complete the buy, it will be necessary to keep that production line warm at something like an estimated cost of $1.7 million for the next, I don't know how many years was that—anyway, that was the cost estimate we had for the first cycle of keeping it warm, why should we not slow this down to your original request rate and really use your original request?

It is not stretching out. Your original projected date for delivery was 1991. Congress accelerated the delivery cycle; you didn't.

Why should we now in this period of real tight budget hold to the high congressional rate of production?

General WAGNER. Basically the answer to that—as it was on the helicopter—is because we can modernize faster. We do have significant savings if we do buy on a multiyear contract for the 840 tanks.

In fact, we estimate we will save about $657 million on a multiyear contract at 840 tanks per year.

Senator STEVENS. When you are borrowing that money at 11 percent, there aren't any savings. If we had it in the bank, you would be right. When you are borrowing the money in advance, there are no savings.

General WAGNER. I don't disagree with that, sir. We will pay, depending on how low you drop the production rate, a significant additional cost for the tank.

For example, if you drop to 720, we will probably pay over $100,000 to $200,000 a copy more for the tanks. If you drop to 600, it goes up to nearly half a million dollars more a copy to buy the tanks.

Senator STEVENS. When Chrysler sold that tank contract to General Dynamics they got several hundred million dollars for the contract.

Was that price that G.D. made Chrysler for the contract added to your base?

Mr. SCULLEY. No, sir.

Senator STEVENS. Are you sure?

Mr. SCULLEY. I will verify that and provide it for the record.

CHRYSLER/GENERAL DYNAMICS COST COMPARISONS

Senator STEVENS. In view of all of the things we have been reading lately, I would like to have a detailed explanation for the record of the cost projection when Chrysler owned it as compared to the cost projection now that G.D. has that contract.

As I understand it, the plant wasn't owned by Chrysler anyway.

Mr. SCULLEY. That is correct. It was a Government-owned plant. It was operated on contract by Atlantic Systems.

Senator STEVENS. Chrysler had a contract to operate it?

Mr. SCULLEY. That is correct.

Senator STEVENS. Chrysler sold the contract to operate that Government plant to G.D. for many millions of dollars?

Mr. SCULLEY. Yes, sir, many hundreds of millions.

Senator STEVENS. That either implies there was a lot of slack in the contract when Chrysler had it or else that purchase price by G.D. has been added to the Government bill.

I was under the impression Chrysler was not making a lot of money out of the tank, to begin with.

Mr. SCULLEY. I would agree. we have seen great improvement in the operations of both the Detroit and Lima plants, increases in productivity, drastic reductions in the man-hours required to manufacture that tank.

I will be happy to provide all of that.

Senator STEVENS. You understand what I want to know?

Mr. SCULLEY. Yes, sir.

Senator STEVENS. I want to know what is above the line on the G.D. contract as far as repayment by the Government. Does it amount to any way amortizing that payment to Chrysler?

Mr. SCULLEY. I understand the question.

[The information follows:]

GDLS RECOVERY OF CHRYSLER DEFENSE PURCHASE PRICE

None of the cost related to the acquisition of Chrysler by General Dynamics is included above the line. Amortization of the purchase price against profits at the corporate level is clearly disclosed on the General Dynamics Consolidated Balance Sheet.

Under Chrysler management, the baseline Design to Unit cost of the Abrams Tank in 72$ is $555.7K. Each of these incorporates the latest tank improvements and reflects a mix of M1 and M1A1 tanks.

FORWARD AIR DEFERRAL SYSTEMS

Senator STEVENS. Senator Kasten.

Senator KASTEN. Mr. Chairman, I have just one brief question. There is some debate concerning the Army's need for forward air defense systems. In light of the controversy surrounding the Sergeant York weapon system, the Divad, I want to ask you about the need for forward air defense for all of our Army divisions.

If the Divad air defense system ends up mostly with the Guard and Reserves and the Divad does not come about, then what is your plan to support the active force heavy divisions and also would you discuss how the Army would provide air defense to the new light divisions being formed?

General WAGNER. First of all, sir, if the Sergeant York Program were stopped today, those improved Vulcans that we plan to send to the Guard would be delayed because we would have to keep them in the active forces because we would have to have them for the first units that enter combat.

They would go to any Guard units deployed with the first few active divisions which we call round-out units. I don't believe any of the Guard units are in that category. There would be a delay in modernizing the Guard.

In this testing we are looking at some alternate systems. There is no alternate gun that we could field for several years because there is not one in the marketplace today that is as cheap or better than the Divad. The Sergeant York, Divad, we feel is doing well now.

We are going to come back to the Congress to give you the results 60 days after the test ends. We would hope to be back here sometime in August with the final results.

STINGER HAND-HELD WEAPONS

Senator KASTEN. Is there any difference between how you would provide air defense to the new so-called light divisions as opposed to the regular heavy divisions?

General WAGNER. Yes, sir. Light divisions are equipped with more Stingers which are hand-held weapons. We are looking at mounting those Stingers over the next several years on a light vehicle to give them more capability.

The light divisions will not in many cases be under the same heavy air threat that our heavy divisions would be in Central Europe. We do have long-range plans to give them a light air defense gun, but that is years away. It is just beginning R&D now.

Senator KASTEN. I have a couple other questions to submit for the record to follow that.

Thank you very much.

Senator STEVENS. Delighted.

I see our friend from New York is here. There is a vote on. I will recognize him now.

Senator D'AMATO. Mr. Chairman, since we do have a vote on, I wonder if I might submit my two questions for the record?

Senator STEVENS. I appreciate that very much.

Thank you for coming.

Let me ask just a couple more questions and then we will wind it up because I know you have to go, Dr. Sculley, and by the time we get back it will be your deadline anyway.

SECOND SOURCE FOR STINGER MISSILE

We asked you last year to see if you could establish a second source for the Stinger missile. That procurement is going to double in the next 2 years.

What has been done about looking to second source for Stinger?

Mr. SCULLEY. We are continuing to look at opportunities to compete components of the Stinger system. The primary item that is attractive, in fact, is the motor itself.

We are currently under contract with General Dynamics' Pomona Division on what we call a programmable microprocessor, approximately a $40 million R&D program that would allow us to get on top of the power curve and not be reactive to the Soviet threat, but allow us through software changes to accommodate changes in threat, that, as I mentioned, is a contract with General Dynamics.

General WAGNER. To expand on that a bit, sir, we have required the prime contractor to have multiple sources for the majority of the elements of that missile and recompete those each year.

However, as I have discussed with your staff previously we are also reopening the question now. With the number we may be putting on the battlefield, increasing because it has proved very effective in the testing, to go to a multiple source may make sense.

That study is going on now. I will keep your staff and you informed.

Senator STEVENS. You have cause to establish that second source?

General WAGNER. That is one of the things we are looking at now, sir. When we studied it a few years ago, it was before my time, it did not appear to be cost effective. It would cost more than the savings.

However, with the cost of it and the number we are going to buy, we have reopened that question.

Senator STEVENS. I was going to ask some questions about some of your SMART missiles, but I understand Senator D'Amato has those. No use duplicating them.

I want to tell you from my point of view your part of the budget is the cleanest part of the Defense budget this year. You have been doing a tremendous job trying to save dollars. We want to encourage you to do it.

PRODUCTION RATE ON M-1 TANK

I particularly would urge you to take a look at that production rate on the M-1. We are going to have to hit you somewhere. You know it and I know it.

We hope to be back to a balanced budget by 1989 at the latest. If we are, we are no longer borrowing money, General. Beyond that, if you have all your production out by 1989, you are going to have to spend $1.7 billion to keep that line warm for the next production period anyway.

It just seems to us that there is a double savings to be brought about by stretching that out to a 2-year period; $2 billion plus the interest factor is a substantial savings to make. I think that one action alone will absorb the total reduction the Army would have to bear.

It is something that I know you don't like, but it is going back to where you were, to begin with. I would hope you would take a good look at it. It might be more difficult politically to hold than anything else because other people want to reduce your program elsewhere.

I am told your program you submitted in this cycle was 720. The original when we first started was 600. Your 720 was your original request for this cycle. If you can take it down to what I call a minimum economical rate of production for this period, you would save $2 billion and we could protect the balance of your program which I think will be a substantial contribution to your effort.

Thank you, gentleman. We appreciate it.

Mr. SCULLEY. Thank you, Mr. Chairman.

SUBMITTED QUESTIONS

Senator STEVENS. There are a number of questions which have been submitted for your response. They will be inserted in the record at this point.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

ADDITIONAL COMMITTEE QUESTIONS

O&M Costs of Army Modernization

QUESTION: In 1984, of the deliveries scheduled and budgeted, over 60 percent of your intensively managed new systems delivered fewer weapons than planned. What guarantees can you provide to the Committee that funds requested for force modernization in FY 1986 are budgeted accurately?

ANSWER: In FY 82, excess dollars in the force modernization program were caused primarily by poor cost estimating techniques; slippages in fielding plans were a minor contributing factor. Since that time, the Army has significantly revised budgeting procedures to include anticipation of some slippage. In both FY 83 & 84, the Army overcompensated, requiring funds to be reprogramed into the modernization program. In FY 84, $179 M or 14% was moved into the program despite the slippages. In the aggregate, the Army has a proven track record for budgeting accurately.

QUESTION: What happens to excess funds which are not required for systems that have delayed deliveries? Do excess funds transfer to other programs or to support general O&M requrirements?

ANSWER: a. Funds which are not required for systems that have delayed deliveries are utilized for systems which have increased requirements or which were not fully funded. Funds are not considered excess unless they cannot be spent within the modernization program.

b. Since the Army instituted revised procedures in FY 83, there have been no excess funds. Should the situation arise where funds cannot be used within the modernization program, they would be used towards sustainment of intensively managed systems or other smaller weapon systems. Transfer of funds to other programs or to support general O&M requirements is highly unlikely.

QUESTION: The Army has already spent $90 million to prepare for fielding DIVAD and is requesting another $70 million in FY 1986. Considering the problems with this system, why has so much been spent already? Why should the Congress continue to provide support funds when this system most likely won't deploy in FY 1986?

ANSWER: a. There are considerable "up-front" O&M costs in fielding a new system; these include training and combat development activities, supply management preparations, and maintenance program planning. Additionally, approximately $55 million has been/is being spent on the follow-on evaluation. Had there not been so much concern, a less elaborate evaluation would have been conducted.

b. SGT York is already in the fielding process. The first production option (50 fire units) was exercised in May 1982 and the second option (96 fire units) exercised in May 1983. To date, 46 fire units have been accepted by the government. Of these, 25 have been designated for training of new soldiers at Fort Bliss and Redstone Arsenal. 21 other fire units are either involved in materiel testing of production units or assigned to a Fort Bliss unit undergoing operational testing known as Follow-on Evaluation I. Fire units continue to be accepted by the government and require support for operation and maintenance.

QUESTION: Please provide the latest data on actual fieldings to date and changes in planned deliveries for FY85 and FY86 for Intensively Managed Systems.

ANSWER: The requested data is voluminous and classified. It will be provided under separate cover to the subcommittee.

QUESTION: What is the change in dollar requirements associated with slipped deliveries?

ANSWER: Zero. Two major factors are involved. First of all, delivery slippages of up to a year will in most cases result in an obligation of fielding dollars in the budgeted year. This occurs because of the lead time required to have initial repair parts, special tools, test equipment and publications on hand when the end item arrives. Second, anticipation of some delivery slippages is included in the budget. Based on current figures, the force modernization can be executed as budgeted.

QUESTION: An area of concern for the Committee is the number of systems with zero deployment to date which have expended funds associated with initial fielding and sustainment. What will the Army do to adjust its accounting process to separate development costs from fielding?

ANSWER: The accounting or tracking process now in use, Force Modernization Reporting System (FORMS), is currently capable of distinguishing between developer and fielding costs. The definition of fielding as it currently applies to TRADOC does not provide for a true distinction between fielding and developer costs; we are in the process of fixing this.

QUESTION: Can the Army assure the Committee that in the future, no funds will be requested for fieldings and initial sustainment unless planned deliveries are scheduled for the system in that budget period?

ANSWER: We are in the process of fine tuning our definition of fielding as it applies to TRADOC to accomplish this. The definition of fielding as it applies to user MACOMs and AMC is such that no funds would be requested for fieldings unless there are planned deliveries either in the budget year or in subsequent years that require funds in the budget year because of long lead times.

QUESTION: Some assessments of fixed costs associated with force modernization have been as high as 55%. What percent of the Army O&M budget for FY86 for force modernization are fixed?

ANSWER: Fixed costs are construed to mean those costs which do not vary as a function of quantity. The Army does not presently utilize a concept of fixed costs in building the modernization budget. These costs have been aggregated with costs that vary directly as the quantity changes. There is no percentage estimate of the FY86 force modernization fixed costs.

QUESTION: What method does the Army have to identify fixed costs? Can this be identified in relation to specific weapons systems and Major Commands?

ANSWER: a. This is an area in which we are currently devoting a great deal of attention. The key is in definition of the various cost cells. We are in the process of segregating cost cells by the workload factors which drive them. User MACOM costs vary predominantly as a function of the quantity of systems and the operating tempo; however, some costs are a function of manpower authorizations and other factors. Additionally, not all costs have a linear relationship to either the quantity or the operating tempo, and an aggregation of costs with differing bases obscure the relationship.

b. When our restructuring is complete, all costs will be able to be identified by system, by MACOM and by workload factor.

QUESTION: Is the Army planning to alter its operating tempos for FY86 from its FY85 levels? Please delineate any changes and the impact on funding requirements.

ANSWER: No, there are no current plans to alter operating tempos for FY86 from FY85 levels. The tempos previously provided the Committee as part of the force modernization budget display will be used. However, there is currently an unspecified reduction of $25-30M pending in the authorization bill, unless this reduction is translated to a programmatic decrease in the appropriations bill, an operating tempo reduction in order to reduce activity level to funds appropriated cannot be ruled out.

STINGER

Question: Why aren't you competing the entire STINGER program? Can't the $34 million budgeted to increase current production be used to establish a second production source?

Answer: Competition in the STINGER program is accomplished through subcontracts and material procurements. Introduction of competition at the prime contractor level was studied in conjunction with the STINGER-POST/RMP production decision in Jun 83. A competitive strategy was not adopted because large upfront costs were required to establish and qualify a second source and significant savings could not be realized. Establishment and qualification of a second source required increasing the program funding by about $200 million over the first three to four years. This would result in a net savings of about $100 million over the life of the program.

Current plans are to annually compete up to 31% of the dollar value of subcontracts and purchase materials. This represents 52% of the total cost of the missile. The largest subcontracts being competed include the rocket motor, hybrid microelectronic assemblies, and ultraviolet/infrared detector production. Competition of the rocket motor has been initiated with the FY85 buy. Second sources for detector production and hybrid microelectronic assemblies are currently being qualified by the prime contractor with competitive buys to be initiated in FY86 and FY87.

The Army has initiated a new study concerning the introduction of competition. This study is being conducted by an independent contractor and will be completed in Oct 85. A decision to further compete will be revisited after receipt of the study results.

Remotely Piloted Vehicles (RPVs)

QUESTION: The Army's Aquila RPV was extended to a 9 month development program last year. Recently the Army proposed reprograming some $10 million for other RPV programs in

FY85--the SKYEYE and an ultra-light RPV. What specifically are the Army's plans for these two programs?

ANSWER: The Army requested $10.2M reprograming for FY85 to support investigation of ultra-light RPV technology and for the SKYEYE RPV. The $2.0M for the ultra-light offers the Army opportunities to examine the military potential of future technologies. [Deleted.] Both programs are designed to capitalize on the emerging technologies demonstrated by RPV industries.

QUESTION: The Army's Aquila RPV was extended to a 79 month development program last year. Recently the Army proposed reprograming some $10 million for other RPV R&D programs in FY85--the SKYEYE and an ultra-light RPV. Is the SKYEYE intended as an alternative or complement to the Aquila program?

ANSWER: The Aquila and SKYEYE RPV programs are complementary. The Aquila is the Army's near term deployable system for employment by division and lower echelons [Deleted]. Aquila is a relatively complex system designed to survive in high intensity environments. The SKYEYE RDTE effort is designed to evaluate a non-developmental system for operational use in a low intensity conflict environment.

AQUILA-RPV

QUESTION: The Senate Armed Services Committee, I understand, has directed that the Aquila RPV program be restructured to buy only a limited number of mission payload packages rather than a complete set for every air vehicle.

If the Army were to follow that direction, how would your FY 1986 funding requirements be changed?

ANSWER: Funding requirements would not change because FY 1986 procurement is only for three air vehicles and all should be equipped with mission payloads. These vehicles will likely be part of the training base.

LIGHT ANTIARMOR WEAPON

QUESTION: The Army is seeking $107 million for a lightweight multi-purpose weapon as a substitute for Viper. Describe how the requirements for this new weapon are different from those of the Viper in terms of weight, range and armor penetration.

ANSWER: The original Army requirement for what was later entitled "VIPER" specified a weight of 7 pounds or less, a range of [deleted] meters and penetration of (d) inches of rolled homogeneous armor. This would equate to a single shot kill probability against a stationary medium battle tank of [deleted.]

The draft requirement document for the Lightweight Multi-purpose weapon specifies a weight of 16 pounds or less, a maximum range of at least (d) meters and a minimum range of not more than (d) meters. No armor penetration is specified; however, the draft document does specify a single shot kill probability against a stationary BMP of [deleted.]

Special Operating Forces (SOF) Helicopters

QUESTION: What other things is the Army doing to improve its SOF capability and how much will that cost?

ANSWER: The Army's goal is to complete the modernization and revitalization of it's Special Operations Forces by 1991. The architecture for this revitalization effort is contained in the SOF Master Plan, approved by Secretary Marsh in April 1984. This plan calls for the time-phased enhancement of the force, and excluding SOF aviation initiatives, includes the following major efforts:

FY 86. Procure communications equipment for active and reserve Special Forces (SF); increase staffing of Ist Special Operations Command (SOCOM); activate the initial increment of a special operations communications battalion and a special operations support battalion; activate an additional company of SF for the forward deployed Bn in Okinawa; and increase the authorized level of organization (ALO) of two SF Military Intelligence (MI) companies.

[Deleted.]

Excluding the costs associated with SOF aviation enhancement, funding requirements for support of the force (RDTE, procurement, OMA, MPA, MCA) are as indicated below in millions of dollars:

FY 86		
572.5	[Deleted]	[Deleted]

T-700 Multiyear Procurement

Question. With development of the improved engine model, do the Services plan to establish one common model which could be used by all helicopters needing a T-700 engine?

Answer. The T-700, T-701, T-401 are over 90% common by engine part content. At this time there is no plan by the Services to establish a 100% common engine.

Question A. Will the model 700 engines being procured for the Army BLACK HAWK under Multiyear II become obsolete in late 1986 when the weight of the airframe and mission equipment outdistance the power capabilities of the engine?

Answer A. The series T-700 engines being procured for the UH-60 under Multiyear II will not become obsolete in late 1986. Since the UH-60A was introduced in 1979, its mission capabilities have been improved. Many of these mission improvements have resulted in weight increases. In late 1986, the UH-60As being delivered with the T-700 will still be able to achieve a vertical rate of climb of 450 feet per minute at 4,000 feet pressure altitude and 95°F temperature, which was the original requirement for the first BLACK HAWKS. The Army is presently examining T-700 series alternatives.

Question B. Similarly, will the Navy 401's become obsolete during the multiyear period?

Answer B. The Navy considers the -401 satisfactory for current requirements. Projections for future aircraft weight growth are being assessed to determine if a small power increase is needed. If increased power is required, the projected schedule for the -405 will satisfy the Navy needs.

Question A. To what extent will the performance requirements of the BLACK HAWK be degraded in late 1986 and beyond, or until the model 405 is introduced to the fleet?

Answer A. In late 1986 the delivered UH-60s with T-700 engines will be capable of achieving 450 feet vertical rate of climb under the conditions of 4,000 pressure altitude and 95° F temperature.

Question B. What effect would this performance degradation have on the BLACK HAWK operating in a hostile situation in extreme heat or humidity?

Answer B. The Army is examining T-700 series alternatives to the required mission performance, which would include operating in a hostile situation in extreme heat or humidity.

ARMY HELICOPTER IMPROVEMENT PROGRAM

QUESTION: Provide details on the Army UV-18A program. Why are FY 1986 spares needed?

ANSWER: The Army has six UV-18 (TWIN OTTER) aircraft, all in the Alaska National Guard. The last procurement was for two aircraft in 1982. The aircraft is particularly well suited for the remote sites often used by troops in Alaska. It has excellent short and rough field capability and a good payload capacity. The UV-18 initial spares line that has been identified is an administrative error. The $1.5 million requirement identified for the UV-18 should have been identified for AH-64 initial spares. This error will be corrected during execution.

AVIONICS

QUESTION: For both producers, provide all actual deliveries by month and service to date for the Fiscal Year 1982 and Fiscal Year 1983.

ANSWER: AN/AVS-6 Night Vision Goggle first article testing was completed in April 1985. Deliveries since first article testing have been 3 sets from Varian Associates, Incorporated, Palo Alto, California, in May 1985. Seven sets were delivered to the Army from Varian and 8 sets from International Telephone and Telegraph, Roanoke, Virginia, in February 1985 to support an urgent Army need. Testing on the AN/AVS-6 test set is scheduled for completion in late June 1985; fielding will follow during the fourth quarter Fiscal Year 1985. Anticipated deliveries to the Army for each of the contractors in June 1985 is 35 sets each. Other services have not yet received any deliveries of production AN/AVS-6.

QUESTION: What is the maximum production rate for the AN/AVS-6? If it is above 200/month, how has it increased in the past year without budget funding?

ANSWER: The maximum economic production rate for AN/AVS-6 Night Vision Goggles is 200 units per month per contractor. The economic procurement quantity is 75 units per month for each of the contractors. A maximum production rate of 250 units per contractor per month (listed on the P-21 form outside the preprinted block for production rates) refers to a maximum all-out effort using installed production equipment or equipment that can be installed during the production leadtime.

FY 86 ARMY MODERNIZATION

PATRIOT fire unit and missile deliveries to the U.S. Government against the existing production contracts

FIRE UNITS

	CY 84				CY 85		
	1Q	2Q	3Q	4Q	1Q	Apr	May
Contract	0	1	0	3	3	1	1
CUM required	10	11	11	14	17	18	19
Actual	1	3	0	2	2	1	1
CUM delivered	8	11	11	13	15	16	17

MISSILES

	CY 84				CY 85		
	1Q	2Q	3Q	4Q	1Q	Apr	May
contract	3	32	54	79	92	32	32
CUM required	251	283	337	416	508	540	572
Actual	36	35	27	3	1	27	63
CUM delivered	251	286	313	316	317	344	404

Projected recovery of fire units to contracts schedule is third quarter, CY 85. Missile deliveries will return to schedule by fourth quarter, CY 85.

The requested FY 1984-FY1987 (P-12) cost breakdown is provided at attachment:

MISSILE PROCUREMENT ARMY/ACTIVITY 2

MISSILE COMPONENT COST BREAKDOWN
COMBINED
(U.S. + GERMANY + NETHERLANDS)

EXHIBIT P-12
DATE: 28 May 85

MISSILE SYSTEM: PATRIOT (SAM-D) (CA0300)

PRIME CONTRACTOR: RAYTHEON

REPORTS CONTROL SYMBOL DD-COMP(AR) 1092

	FY84			FY85			FY86			FY87		
SYSTEM/ITEM BREAKDOWN	QTY	UNIT COST	TOTAL	QTY	UNIT COST	TOTAL	QTY	UNIT COST	TOTAL	QTY	UNIT COST	TOTAL
MISSILE COMPONENTS												
AIRFRAME	440	.023	10.0	565	.022	12.7	770	.022	16.9	810	.022	17.6
PROPULSION	440	.103	45.4	565	.101	57.0	770	.098	75.6	810	.098	79.2
GUIDANCE AND CONTROL	440	.447	196.6	565	.437	246.8	770	.426	327.9	810	.423	342.8
WARHEAD	440	.081	35.5	565	.078	44.3	770	.079	60.9	810	.079	63.9
CANISTER	440	.059	25.9	565	.057	32.2	770	.051	39.4	810	.051	41.3
SUBTOTAL		.713	313.4		.696	393.0		.676	520.7		.673	544.8
GROUND SUPPORT EQUIPMENT COMPONENTS *												
RADAR SET	13	17.300	224.9	15	17.381	260.7	15	16.889	253.3	15	17.281	259.2
ENGAGEMENT CONTROL STATION	16	3.553	56.8	15	4.187	62.8	15	4.104	61.6	15	4.223	63.3
LAUNCHING STATION	62	1.504	93.2	121	1.347	163.0	121	1.256	151.9	124	1.267	157.2
INFORMATION COORDINATION CENTRAL	3	3.700	11.1	6	2.956	17.7	3	2.807	8.4	4	2.931	11.7
COMMUNICATIONS RELAY SET	12	1.658	19.9	13	1.008	13.1	4	1.325	5.3			
ANTENNA MAST SET	24	.988	23.7	24	1.288	30.9	24	1.321	31.7	24	.571	13.7
ARM DECOY SET				18	.361	6.5	24	.329	7.9	32	.313	10.0
PECULIAR SUPPORT EQUIPMENT			15.7			30.9			19.7			27.0
SUBTOTAL			445.3			585.6			539.8			542.1
TOTAL MISSILE & GSE			758.7			978.6			1060.5			1086.9
OTHER RECURRING COSTS												
TRAINING EQUIPMENT			2.3			6.4						.4
CONTRACTOR ENGINEERING			46.2			58.9			61.1			59.6
GOVERNMENT ENGINEERING			35.4			38.0			38.3			36.7
INTEGRATED LOGISTICS SUPPORT			21.8			56.0			46.8			54.8
DMPE						9.3			7.4			9.8
SPTE (MEMO ENTRY)			10.8			13.5			9.9			15.8
OTHER NON-RECURRING COSTS												
IPF			41.3			23.7						
NET P-1 COST												
SPARES			110.5			101.7			116.1			114.3
MODIFICATIONS						11.8			17.2			52.9
MODIFICATION SPARES									4.3			5.1
TOTAL PROGRAM COSTS			1016.2			1284.4			1351.7			1420.5

* CERTAIN GROUND SPT GFE ITEMS ARE NOT PROCURED UNDER FMS. THEREFORE, GSE UNIT COST IS LOWER THAN U.S.

ILE PROCUREMENT ARMY/ACTIVITY 2

MISSILE COMPONENT COST BREAKDOWN
U.S.

EXHIBIT P-12
DATE: 28 May 85

MISSILE SYSTEM: PATRIOT (SAM-D) (CA0300)

PRIME CONTRACTOR: RAYTHEON

ORTS CONTROL SYMBOL DD-COMP(AR) 1092

	FY84			FY85			FY86			FY87		
SYSTEM/ITEM BREAKDOWN	QTY	UNIT COST	TOTAL	QTY	UNIT COST	TOTAL	QTY	UNIT COST	TOTAL	QTY	UNIT COST	TOTAL
SSILE COMPONENTS												
AIRFRAME	440	.023	10.0	440	.022	9.9	585	.022	12.8	700	.022	15.2
PROPULSION	440	.103	45.4	440	.101	44.4	585	.098	57.5	700	.098	68.4
GUIDANCE AND CONTROL	440	.447	196.6	440	.437	192.2	585	.426	249.1	700	.423	296.3
WARHEAD	440	.081	35.5	440	.078	34.5	585	.079	46.3	700	.079	55.2
CANISTER	440	.059	25.9	440	.057	25.1	585	.051	30.0	700	.051	35.7
SUBTOTAL	440	.713	313.4	440	.696	306.1	585	.676	395.7	700	.673	470.8
OUND SUPPORT EQUIPMENT COMPONENTS												
RADAR SET	12	17.300	207.6	12	17.617	211.4	12	17.109	205.3	12	17.550	210.6
ENGAGEMENT CONTROL STATION	12	4.432	53.2	12	4.333	52.0	12	4.316	51.8	12	4.454	53.4
LAUNCHING STATION	60	1.506	90.4	100	1.416	141.6	100	1.322	132.2	100	1.338	133.8
INFORMATION COORDINATION CENTRAL	3	3.696	11.1	4	2.982	11.9	2	2.931	5.9	2	3.063	6.1
COMMUNICATIONS RELAY SET	12	1.654	19.9	12	1.058	12.7	4	1.330	5.3			
ANTENNA MAST SET	24	.987	23.7	24	1.288	30.9	24	1.321	31.7	10	1.366	13.7
ARM DECOY SET				18	.362	6.5	24	.328	7.9	32	.312	10.0
PECULIAR SUPPORT EQUIPMENT			14.5			21.3			16.1			13.0
SUBTOTAL			420.4			488.3			456.2			440.6
TOTAL MISSILE & GSE			733.8			794.4			851.9			911.4
ER RECURRING COSTS												
TRAINING EQUIPMENT												
CONTRACTOR ENGINEERING			43.7			43.1			43.2			45.0
GOVERNMENT ENGINEERING			35.4			34.3			34.1			34.2
INTEGRATED LOGISTICS SUPPORT			21.8			56.0			46.8			54.8
OMPE						9.3			7.4			9.8
SPTE (MEMO ENTRY)			10.8			13.5			9.9			15.8
ER NON-RECURRING COSTS												
IPF			41.3			23.7						
P-1 COST												
SPARES			87.5			85.0			105.0			105.6
MODIFICATIONS						11.8			17.2			52.9
MODIFICATION SPARES									4.3			5.1
AL PROGRAM COSTS			963.5			1057.6			1109.9			1218.8

ILE PROCUREMENT ARMY/ACTIVITY 2

MISSILE COMPONENT COST BREAKDOWN
GERMANY

EXHIBIT P-12
DATE: 28 May 85

MISSILE SYSTEM: PATRIOT (SAM-D) (CA0300)

PRIME CONTRACTOR: RAYTHEON

ORTS CONTROL SYMBOL DD-COMP(AR) 1092

SYSTEM/ITEM BREAKDOWN	FY84 QTY	FY84 UNIT COST	FY84 TOTAL	FY85 QTY	FY85 UNIT COST	FY85 TOTAL	FY86 QTY	FY86 UNIT COST	FY86 TOTAL	FY87 QTY	FY87 UNIT COST	FY87 TOTAL
SSILE COMPONENTS				105	.022	2.3	165	.022	3.6	70	.022	1.5
AIRFRAME				105	.101	10.6	165	.098	16.2	70	.098	6.9
PROPULSION				105	.437	45.9	165	.426	70.3	70	.423	29.6
GUIDANCE AND CONTROL				105	.078	8.2	165	.079	13.0	70	.079	5.5
WARHEAD				105	.057	6.0	165	.051	8.4	70	.051	3.6
CANISTER					.695	73.0		.676	111.5		.673	47.1
SUBTOTAL												
UND SUPPORT EQUIPMENT COMPONENTS *												
RADAR SET				2	16.502	33.0	2	15.886	31.8	2	16.069	32.1
ENGAGEMENT CONTROL STATION				2	3.670	7.3	2	3.132	6.3	2	3.184	6.4
LAUNCHING STATION				16	.921	14.7	16	.824	13.2	16	.803	12.8
INFORMATION COORDINATION CENTRAL				1	2.918	2.9	1	2.520	2.5	1	2.587	2.6
COMMUNICATIONS RELAY SET				1	.405	.4						
ANTENNA MAST SET												
ARM DECOY SET												
PECULIAR SUPPORT EQUIPMENT						5.9			2.5			7.1
SUBTOTAL						64.2			56.3			61.0
TOTAL MISSILE & GSE						137.2			167.8			108.1
ER RECURRING COSTS												
TRAINING EQUIPMENT						6.1						.4
CONTRACTOR ENGINEERING						11.8			14.2			10.4
GOVERNMENT ENGINEERING						3.1			3.7			1.6
INTEGRATED LOGISTICS SUPPORT												
ER NON-RECURRING COSTS												
TPF												
P-1 COST												
SPARES						13.2			8.5			5.9
MODIFICATIONS												
MODIFICATION SPARES												
L PROGRAM COSTS						171.4			194.2			126.4

ITAIN GERMAN CONFIGURATION GROUND SPT GFE ITEMS ARE NOT PROCURED UNDER FMS, THEREFORE, GSE UNIT COST IS LOWER THAN U.S.

SILE PROCUREMENT ARMY/ACTIVITY 2

MISSILE COMPONENT COST BREAKDOWN
NETHERLANDS

EXHIBIT P-12
DATE: 28 May 85

MISSILE SYSTEM: PATRIOT (SAM-D) (CA0300)

PRIME CONTRACTOR: RAYTHEON

PORTS CONTROL SYMBOL DD-COMP(AR) 1092

	FY84			FY85			FY86			FY87		
SYSTEM/ITEM BREAKDOWN	QTY	UNIT COST	TOTAL	QTY	UNIT COST	TOTAL	QTY	UNIT COST	TOTAL	QTY	UNIT COST	* TOTAL
ISSILE COMPONENTS												
AIRFRAME				20	.022	.4	20	.022	4	40	.022	.9
PROPULSION				20	.101	2.0	20	.098	2.0	40	.098	3.9
GUIDANCE AND CONTROL				20	.437	8.7	20	.426	8.5	40	.423	16.9
WARHEAD				20	.078	1.6	20	.079	1.6	40	.079	3.2
CANISTER				20	.057	1.1	20	.051	1.0	40	.051	2.0
SUBTOTAL					.695	13.9		.676	13.5		.673	26.9
ROUND SUPPORT EQUIPMENT COMPONENTS *												
RADAR SET	1	17.305	17.3	1	15.310	16.3	1	16.270	16.3	1	16.471	16.5
ENGAGEMENT CONTROL STATION	1	3.641	3.6	1	3.471	3.5	1	3.499	3.5	1	3.570	3.6
LAUNCHING STATION	2	1.411	2.8	5	1.326	6.6	5	1.311	6.6	8	1.314	10.5
INFORMATION COORDINATION CENTRAL				1	2.919	2.9				1	3.035	3.0
COMMUNICATIONS RELAY SET												
ANTENNA MAST SET												
ARM DECOY SET												
PECULIAR SUPPORT EQUIPMENT			1.7			3.7			1.1			6.8
SUBTOTAL			24.9			33.0			27.5			40.4
TOTAL MISSILE & GSE			25.0			46.9			41.0			67.3
HER RECURRING COSTS												
TRAINING EQUIPMENT			2.3			.3						
CONTRACTOR ENGINEERING			2.5			4.0			3.7			4.2
GOVERNMENT ENGINEERING						.6			.5			.9
INTEGRATED LOGISTICS SUPPORT												
HER NON-RECURRING COSTS												
IPF												
T P-1 COST												
SPARES			23.0			3.5			2.6			2.8
MODIFICATIONS												
MODIFICATION SPARES												
TAL PROGRAM COSTS			52.8			55.3			47.8			75.2

ERTAIN DUTCH CONFIGURATION GROUND SPT GFE ITEMS ARE NOT PROCURED UNDER FMS, THEREFORE, GSE UNIT COST IS LOWER THAN U.S.

STINGER

Question: Is the maximum economical production rate for STINGER still 4,000 per year?

Answer: Yes. With the current tooling and test equipment on a 1-8-5 shift.

Question. How will the total Army/USMC FY86 program of 4,239 missiles be produced?

Answer: Sole source from General Dynamics - Pomona, CA, under a FP/FPI contract. Only the guidance section will be FPI.

Question: What is the plan, by year, and the funding for increasing the STINGER Production capacity.

Answer: None for basic STINGER. However, the plan for STINGER Post/RMP is to fund $11.3M in FY86 and $15.3 in FY87 for rates of 7200 and 9600 respectively using a 1-8-5 shift.

Question: Has the Army ever studied the possibility of establishing competitive production sources for all-up STINGER missiles? If yes, provide a copy.

Answer: Yes, see attachment 1.

INFORMATION PAPER

DRSMI-FC

SUBJECT: STINGER-POST Competition Analysis

TO: Commanding General

ISSUE: In response to the General's verbal request "Why can't we get competition savings when this has been a way of life at MICOM for years?"

FACTS:
1. Savings as a result of competition on Army missile rounds; e.g., TOW and DRAGON, have been relatively low (see Figure 1). The significant savings were achieved on the launcher and tracker which are less complex, enabling a contractor to bid competitively at a reasonable risk based on the existing technical data package. Competition even results in negative savings as summarized in a recent Navy study (e.g., Standard--see Figure 2).

2. Four studies have been reviewed (APRO, IDA, Beltramo, and Chief Naval Operations studies), by a Joint DA/DARCOM Team to determine the impact of savings as a result of competition for STINGER-POST.

3. The study you requested has been mailed and should be available on or about 22 April 82.

ANALYSIS:
1. The four studies mentioned above concluded that high cost/complex missiles competed in a dual source, split-buy environment, did not usually result in lower costs than their sole source counterparts (negative savings evident in some cases). However, these studies did point out potential savings could be realized by competing subcomponents (breakout procurements) of the missile system.

2. There are other reasons listed in Figure 3 that contribute to the "no savings" expected in the STINGER-POST Seeker competition. Listed in Figure 4 are additional factors that may contribute to "no savings" losses in a competitive environment.

COMPTROLLER POSITION:
Based upon the above facts, and with program instabilities and low quantities, the Joint ICE Team expects "no savings" from competition in the STINGER-POST program.

COMPETITION SAVINGS - ARMY

(DOLLARS IN MILLIONS FY72 DOLLARS)

		ESTIMATED SAVINGS (LOSS)	
	QTY	PRICE	PERCENT
TOW			
MISSILE	25,240	$61.3	8.5
LAUNCHER	959	$83.4	30.2

- SAVINGS ON MISSILE RELATIVELY LOW
- SAVINGS EXCLUDED ADMINISTRATIVE COSTS FOR TWO CONTRACTORS OR THE ADMINISTRATIVE COSTS OF THE COMPETITION INCURRED BY THE GOVERNMENT.
- LAUNCHER LESS COMPLEX ENABLING A CONTRACTOR TO BID COMPETITIVELY AT A REASONABLE RISK BASED ON THE TECHNICAL DATA PACKAGE. HENCE, SAVINGS ON LAUNCHER ATTRIBUTED TO GOVERNMENT NOT INCURRING AN EXPENSE TO EDUCATE A SECOND SOURCE.

DRAGON			
ROUND	40,393	$ 8.0	2.7
TRACKER	4,031	$12.0	12.0

- SAME SHORTCOMINGS AS TOW

FIGURE 1

COMPETITION LOSSES - OTHER SERVICES

(DOLLARS IN MILLIONS FY72 DOLLARS)

			ESTIMATED SAVINGS (LOSS)	
	QTY	ACTUAL PRICE	PRICE	PERCENT
STANDARD MISSILE	5,927	$307.1M	$(11.7M)	(3.9)

- PROGRAM COMPLICATED BY OVERLAPPING CONTRACT LOTS
- SEPARATION OF LEARNING RELATED COSTS LESS RELIABLE
- $10M DOLLAR CLAIM AGAINST GOVERNMENT FOR A FAULTY DATA PACKAGE
- ADMINISTRATIVE COSTS OF COMPLETION NOT INCLUDED

	QTY	ACTUAL PRICE	PRICE	PERCENT
SIDEWINDER				
AIM-9B	67,054	$171.2	$(6.7M)	(4.1)
AIM-9D	9,955	$ 63.8	$(4.4M)	(6.5)

- UNDETERMINED AMOUNT OF ADMINISTRATIVE COSTS EXCLUDED IN SECOND SOURCE PROCUREMENT

FIGURE 2

STINGER COMPETITION ANALYSIS

- REVIEWED APRO, IDA, BELTRAMO, AND CHIEF NAVAL OPERATIONS STUDIES ON COMPETITION.
- THESE STUDIES INDICATED THAT HIGH COST/COMPLEX MISSILES COMPETED IN A DUAL SOURCE, SPLIT BUY ENVIRONMENT DID NOT RESULT IN LOWER COSTS THAN THEIR SOLE SOURCE COUNTERPARTS (NEGATIVE SAVINGS WERE EVIDENT IN SOME CASES).
- MATURITY OF TDP IN FY81, WHEN SECOND SOURCE REQUIRES IT, IS UNCLEAR.
- OTHER INTANGIBLE COSTS WERE NOT INCLUDED - E.G., ROYALTIES PAID BY SECOND SOURCE TO GD FOR PROPRIETARY DATA.
- STINGER - POST QUANTITIES ARE NOT SUFFICIENT (70-80K ROUNDS REQUIRED TO BREAK EVEN).

FIGURE 3

COMPETITION LOSSES - KEY FACTORS

- UNDETERMINED COSTS OMITTED, E.G., GOVERNMENT ADMINISTRATIVE COSTS IN SECOND SOURCE PROCUREMENT.
- LARGE CLAIMS AGAINST THE GOVERNMENT FOR INADEQUATE TECHNICAL DATA PACKAGES.
- LOW QUANTITIES - SHORT PRODUCTION RUNS.
- EXCESSIVE NUMBERS OF ENGINEERING CHANGE ORDERS.
- ADDITIONAL GOVERNMENT TIME AND MONEY TO BRING THE SECOND SOURCE ON LINE.
- DUPLICATE EFFORT E.G., DT/OT TESTING, LOT ACCEPTANCE TESTING, SAFETY VERIFICATION.

FIGURE 4

STINGER

Question: Did the Army agree with OSD's concern that a production build-up rate of 20 missiles a month is appropriate?

Answer: The Army did not agree with OSD's concern over production build-up rates. Included in the FY83 initial procurement of STINGER/POST there was added production leadtime and a transition team to assure a smooth transition from R&D to production. The FY85 procurement was the third buy of POST (i.e., the first major buy) and 60 unit build-up per month was considered achievable.

Question: Does the Army's anticipated delivery schedule for RMP take into account the additional schedule risk of that program? If not, why?

Answer: Yes. The Army anticipated the schedule risk of RMP which was considered to be moderate to low.

Question: Would a STINGER-RMP delivery schedule based on a production build-up rate of 20 missiles a month be appropriate? If not, why?

Anwser: No. There is no new production technology that is not being addressed in the FY83 Production Transition Program that would warrant holding production build-up to only 20 missiles per month. Further 60% of the POST/RMP missile is identical to Basic STINGER.

TOW MISSILE SYSTEM

As a result of the break in production of the TOW missile, nearly two years of production are being crammed into one year.

QUESTION: Does the Army have the ability to monitor quality and to accept and test that many missiles per month?

ANSWER: The Army does have the ability and is monitoring quality and accepting and testing missiles delivered under the revised production schedule. 30 missiles have been fired in fly-to-buy since restart of production without a single failure. In addition, an additional four, picked at random as are fly-to-buy samples, underwent a complete teardown and no discrepancies were found.

QUESTION: Considering the production problems experienced with the TOW-2 missile and the aggressive delivery schedule planned for quantities now under contract, what is the justification for the large increase in fiscal year 1986 quantities?

ANSWER: The production problems and aggressive schedule did not exist when the FY 86 quantities were determined. Also, neither affect the quantities or delivery schedule for FY 86. The production problems experienced with the TOW 2 missile have been solved. Upon resumption of production, mandatory Government inspection stations were established at various points along the production line. Based on acceptable results, these Government inspection stations have been removed, and inspection has been restored to the normal level. The test range at RSA is capable of test firing (fly-to-buy acceptance) missiles for the revised production schedule. The quantities now under contract and those planned in fiscal year 1986 are necessary to meet user requirements with regard to existing threat and equipment deployments and utilization to provide the largest number of missiles at a more economical price.

QUESTION: Why is the Army requesting such an increase in quantities for fiscal year 1986 when the contractor has not had sufficient time to demonstrate its capability to meet the delivery schedule for missiles now under contract? Explain.

ANSWER: The contractor has demonstrated its capability to resume the production of quality missiles. The contractor has proven the capability to deliver missiles on schedule by demonstrated performance of TOW missiles since 1972.

QUESTION: What is the basis for the Army's budgeted costs for the TOW-2 warhead and what factors caused the current unit cost estimate decrease?

ANSWER: At the time the FY 1986 estimate was completed, two warheads were being considered. The lower-priced warhead was selected; thus, the current estimate provides a warhead at a more economical cost. It should be noted, however, that these funds of $1,077 are the total shown to include the Engineering Change Order budget line and is our current estimate. It is emphasized that this covers only one known ECO/ECP. The remaining $125 per missile are the only funds available for ECO's/ECP's that may come about within the next 3 years (1986-1988).

QUESTION: Are the funds exceeding the 5-percent factor included for engineering support actually needed?

ANSWER: Engineering support cost estimate for FY 86 is based on task requirements, cost estimating factors, historical utilization cost, and is the minimum of the amount necessary to support the FY 86 missile deliveries.

Pershing Missile System

The Army currently plans to support the Pershing II with operational test missiles for about 10 years yet has no plan to either modify or replace it within the next 10 years.

QUESTION: What is the maximum number of years that the Pershing can be safely supported with allocated test missiles?

ANSWER: When the Army reduced the total number of missiles to (d) Pershing IIs this represented a program scrub down to what we believe to be the absolute minimum Pershing procurement that is prudent. This procurement supports a 10-year flight test program. A modification program will be run concurrent with the flight test program.

QUESTION: Why shouldn't the program be structured that way?

ANSWER: U. S. Commander-in-Chief, Europe was directed on 14 May 85 to restructure a flight test program that is supportable with the reduced procurement.

M88A1 RECOVERY VEHICLE

QUESTION: Why has the FY 1986 program been increased by 60 vehicles?

ANSWER: M88 Recovery Vehicles are currently short throughout the Army. In FY86 the decision was made to allocate funds to procure an additional 60 Recovery Vehicles in an effort to reduce this shortage and attain the AAO sooner.

QUESTION: What is the impact of maintaining a stable production rate of 15 per month as planned last year and programed beyond FY 1986?

ANSWER: The minimum sustaining rate for the M88A1 Recovery Vehicle is fifteen vehicles per month. Maintaining this rate beyond FY86 enables the Army to obtain a greater percentage of the AAO while allowing the retention of a production base beyond FY86.

M-1 TANK

QUESTION: Budget documents state there was an FY85 funding shortfall for Contractor Engineering and QA. How much was the shortfall for each?

ANSWER: In Jan 85, $39.6M was funded for Contractor Engineering and $13.3M for Contractor QA. In Mar 85, we negotiated and FY84 Systems Technical Support Contract with GDLS which enabled us to refine our FY85 requirements to $49.6M for Contractor Engineering and $12.1M for Contractor QA.

($ MILLIONS)

	Jan 85 Funding	Mar 85 Requirements Revisions	Funding Shortfalls
Contractor Engineering	39.6	49.6	10.0
Contractor QA	13.3	12.1	(1.2)
TOTAL	52.9	61.7	8.8

QUESTION: Explain what $16.3 million for RAM-D/Maintainability will introduce into production?

ANSWER: The RAM-D items currently under consideration for production introduction include 16 Engine, 7 Transmission, 9 Chassis, and 1 Test Set Improvement. These improvements are expected to reduce the outyear O&S costs of the M1 fleet by about $300 million over the life cycle of the program.

The budget for production implementation cost for the above is $13.7 million during FY86. The $16.3 million is in error. It should be $16,310 per unit which is $13.7 million divided by the 840 production rate.

QUESTION: Explain what is in each of the following "elements of cost":

Basic Vehicle
Gun Breech and Mount
120MM Delta
Transmission/Final Drive
Block I Modifications
Block II Modifications

ANSWER: In the Jan 85 P-Form Exhibits, the above cost elements are defined as follows:

Basic Vehicle. The tank chassis cost, less Block I modifications, and Prior Year Long Lead and Economic Order Quantity funding.

Gun Breech and Mount. The cost of the basic 105mm Gun and Mount.

120mm Delta. The cost of the basic 105mm Tank (Gun, Mount, Ammunition Racks, and Tank Integration) and the 120mm Tank.

Transmission/Final Drive. Transmission Center Section and Right and Left Final Drives.

Block I Modifications. The variance in cost over the Basic M1 Tank and the Improved Armor, NBC Protection, and Micro Climate Control System.

Block II Modifications. In the Jan 85 P-Form Exhibits, Block II Modifications reflected the variance in cost over the M1A1 Tank of the Commander's Independent Thermal Viewer, the Commander's Weapon station, and a Carbon Dioxide Laser Rangefinder. Subsequently, in March 85, the VCSA approved a Block II Modification program which encompasses added candidates including Battlefield Management System, Survivability Enhancement, Auxiliary Power Unit and Drivers Thermal Viewer.

QUESTION: Break out the Advance Procurement (AP) P-22 to reflect the year of allocation proposed in the MYP justification.
Identify to which P-20 cost element each of the AP elements should be applied to by element number.

ANSWER: Since Jan 85, a number of changes have taken place in the program, including receipt of revised multiyear proposal data and approval of an expanded Block II Modification program. In general, this updated information was reflected in the MYP justifications.

FY86 ADVANCE PROCUREMENT ($ Mil)

			APR 85 REVISED DATA (MYP EXHIBITS)			
				APPLICATION		
ITEM	ELEMENT NO.	JAN 85 P-FORM	TOTAL	FY87	FY88	FY89
Tank Chassis	(1 + 7)	106.4	101.4	77.4	20.5	3.5
Engine	(2)	78.8	47.3	36.5	8.2	2.6
TIS/LFR	(3)	110.3	48.9	37.4	9.8	1.7
Computer	(3)		8.9	4.6	3.2	1.1
Line of Sight	(3)		4.0	4.0	-	-
CWSS/GAS	(3)		2.9	2.9	-	-
120mm Cannon	(4 + 5)	19.5	37.8	37.8	-	-
Gun Mount	(6)	4.0	6.9	6.9	-	-
Block II Mods	(8)	40.2	101.1	101.1		
TOTAL		359.2	359.2	308.6	41.7	8.9

QUESTION: How much is provided in the last year of the multiyear contract for layaway costs?

ANSWER: There are no funds in the last year of the multiyear specifically for layaway cost. A detailed study is currently underway to determine the Army plan to maintain a warm production base.

QUESTION: How much extra has been budgeted in FY86 track costs to provide for introduction of the improved track upon completion of the 1985 track test program?

ANSWER: A total variance of $6.7 million has been built into the FY86 budget to support the introduction of an improved track.

M-60 SERIES TRAINING DEVICES

QUESTION: Regarding M60 training devices, why are ECP, Test and Evaluation and SPM contractor's costs up over last year?

ANSWER: The increases in the ECP, Test and Evaluation, and Systems Program Management areas from FY85 to FY86 for the M60A3 training device budget line are directly attributable to the initial start of the production of the M60A3 Mobile Conduct of Fire Trainer (M-COFT) configuration. The increase for the ECP area is due to anticipated required changes due to this being first year of production of this configuration. The dollars shown are based upon preliminary estimates for reacting to the potential changes as the system enters production. The Test and Evaluation area increases in cost are due to the requirement for initial production testing, First Article Tests and Comparison Tests of production units. System Program Management has only a small percentage increase when considered as a function of hardware cost. This is due to the need for intensive management by the contractor for the first year's production. Intensified configuration management and quality control efforts are the main areas which will drive the SPM cost increase.

M-1 BALLISTIC COMPUTER

QUESTION: Considering the revised funding requirement for this MYP, does the Army plan to revise its M1A1 budget for FY86 and later years?

ANSWER: The year by year impact of the revised Computer MYP is as follows:

($ Mil)	FY85	FY86	FY87	FY88	FY89	TOTAL
Qty		(840)	(840)	(840)	(779)	(3299)
Mar 85 Exhibit	6.7	17.7	13.2	9.1	4.1	50.8
Revised Price	6.7	16.2	11.6	7.4	2.5	44.4
Variance	-	1.5	1.6	1.7	1.6	6.4

These savings will be used against unfunded Block II requirements.

QUESTION: Will the MYP contract contain adequate provisions to consider possible fluctuations in the exchange rate between the U. S. and Canada?

ANSWER: Since the supplier of the ballistic computer is a Canadian firm, the Government contracts directly with the Canadian Commercial Corporation in accordance with a Memorandum of

Understanding entered into in 1956 between the Canadian Department of Defense Production and the Department of Defense. Implementation of the agreement is in DoD FAR Supplement 25.7102. Canadian Commercial subcontracts 100 percent of the work to the manufacturer of the computer and conducts price negotiations on behalf of the U. S. Government.

DoD FAR Supplement 25.7104(a)(2)(iv) states "All offers and quotations submitted by the Canadian Commercial Corporation, except those in which competition is obtained, shall be in terms of Canadian currency. However, the Corporation may, at the time of submitting the offer, elect to quote and receive payment in terms of U. S. currency and shall not be subject to adjustment for losses or gains resulting from fluctuation in exchange rates." Canadian Commercial Corporation elected to quote in U. S. funds and therefore, the contract will not be subject to adjustments for fluctuations in exchange rates.

M-60 TANK MODIFICATIONS

QUESTION: Except for the M60 tank thermal sight modifications (11-73-05-0054), all M60 mod programs have been increased and accelerated. The M60 TTS program has been reduced. Why?

ANSWER: A multiyear contract with Texas Instrument was initiated with FY83 procurements to accommodate all requirements to support an M60A3TTS fleet size of 7,352. When this fleet size was capped at 5,400 the contractual requirements for TTS systems were reduced. With the FY85 procurement there will be adequate quantities of TTS systems procured to support the acceleration program and the total M60A3TTS tank fleet size of 5,400.

QUESTION: The budget seeks six million in advance funding for the forgings. What is the test and type classification schedule for the tube and ammunition (by type of round)?

ANSWER: The 105mm Tank Gun Enhancement Program (105E) consists of the 105mm XM24 tube, 105mm APFSDS-T XM900 Cartridge and the integration of the XM24 tube into the M1E2 and M60A3E1 tank.

The advanced development testing for the XM24 tube and the XM900 cartridge, was initiated in Nov 83. Advanced Development Testing (Non-firing) of the M1E2 and M60A3E1 was conducted in 1984. PQT-G testing will begin in April 1986 for both vehicles and the XM900. Advanced Development (firing) testing in support of interim safety releases for the XM24 tube, M68A2 breech and the M1 (M1E2 Tank) and M140 (M60A3E1) gun mount, is currently underway. All interim safety releases will be obtained by Nov 85. TC for both the XM24 and XM900 are currently scheduled coincident with the M1E2 and M60A3E1 tanks TC date of Dec 86.

Requalification of the M456A2, HEAT-T round, M490E1 TP HEAT Trainer, M833 APFSDS-T, Kinetic energy round and M724 TPDS-T, Kinetic energy trainer for firing from the XM24 tube is included in the system tests and will be complete prior to type classification in Dec 86.

M-1 TANK MODIFICATIONS

QUESTION: What are programs A, B, C contained in the M1 Modification Line (GA0700) for the FY86 Army WTCV Procurement Budget? What are their description and justification?

ANSWER: [Deleted].

ROBOTIC OBSTACLE BREACHING ASSUALT TANK (ROBAT)

QUESTION: What is the impact of deferring by at least one year the initiation of the ROBAT program?

ANSWER: ROBAT is the only system fully responding to the number one priority deficiency identified in the Combat Engineer Area Analysis. Without ROBAT, the engineer has only limited capability to detect, neutralize and mark paths through minefields. Lack of FY86 funding will result in a slip of the First Unit Equipped (FUE) date from FY88 to FY90. Delay of one year will increase program funding by approximately $8M due to inflation with a potential additional increase in the cost of M60A3 conversion kits because of an independent buy.

BUSHMASTER (M242) GUN

Question: How can a private producer compete with "in-house" sources?

Answer: There is no reason why a private producer cannot compete with government "in-house" sources. Management efficiences, specialized tooling, capacity considerations, product specialization, vendor competition, other markets for the product, proprietary manufacturing processes, and position on the learning curve are all considerations that may allow viable competition of industry with in-house sources.

Weapons System Production Capacity

Question. Specify for FY 1984-87 what production capacity by weapon system is being established under project 68X8015 and 68X8129. Specify the required capacity for each.

Answer. Project 68X8129 is the Rock Island Arsenal REARM project, which is renovating an existing production facility for artillery and tank gun mounts, small arms and spare parts. Its purpose is to modernize a production facility whose mission is to produce complex and precise, small and large caliber weapons systems and components as required for peacetime, and surge requirements. Essentially, the project is new equipment "brick and mortar" oriented. As an added benefit, the facilities and equipment being developed under REARM will allow Rock Island to reach its required mobilization production capacity in 6 months instead of the 24 months required prior to the initiation of the project. Below is shown a typical product mix as identified in the REARM MOD Project, 68X8129, P-15 requests. The gains in capacity are the result of the productivity increases from new machines and buildings. This cost effective project assumes a constant pre-REARM direct labor input. The Rock Island Arsenal is the sole peacetime producer of all of these weapon systems except for the M1/M1A1 gun mount which it co-produces with General Dynamics. Rock Island also produces many spares parts and assemblies which are not reflected in this list.

ITEM	ANNUAL PRODUCTION, TYPICAL PRODUCT MIX	
	PRE-REARM BASELINE	POST-REARM CAPACITY
M85 Machine Gun	600	815
M140A1 Gun Mount (M60 Tank, phased out, capacity reassigned to M1/M1A1 gun mount)	360	0
M178 Gun Mount (M109A3 Self-Propelled Howitzer)	480	651
M174 Gun Mount (M110 Self-Propelled Howitzer)	96	130
M101A1 Howitzer	120	162
M45 Recoil Mechanism (M198 Howitzer)	120	162
M1/M1A1 Gun Mount	360	996

Project 68X8015 is the Watervliet Arsenal REARM project, which is renovating an existing production facility for the engineering and manufacturing of cannon systems, mortars and spares during peacetime, surge, or mobilization. Essentially, the project is new equipment "brick and mortar" oriented. As an added benefit, the facilities and equipment being developed under REARM will allow Watervliet to reach a 1250 tube per month mobilization production capacity in six months instead of the 24 months required prior to the project's initiation. Shown below is a typical product mix as identified in the requests for REARM MOD Project 68X8015. The gains in capacity are the results of productivity increases from new machines and buildings. This cost effective project assumes a constant pre-REARM direct labor input. Watervliet Arsenal is the sole peacetime producer of all thick-walled gun tubes in the United States.

ITEMS	FY84/87 REQUIREMENT /MONTH	CAPACITY/ MONTH
105mm Tank Gun (M68A1)	310	310
105mm Tank Gun Spares	196	196
120mm Tank Gun (M256)	(FY84) 0 (FY85) 7 150	150
105mm Howitzer (M282)	68	68
Spares	94	94
105mm Howitzer (M137A1)	1	1
Spares	1	1

ITEMS	FY84/87 REQUIREMENT /MONTH		CAPACITY/ MONTH	
155mm Howitzer (M182)		33		33
155mm Howitzer (M185)		104		104
Spares		42		42
155mm Howitzer (M199)	(FY84)	75		90
	(FY85+)	90		
165mm Gun (M135)		6		6
175mm Gun (M113A1)	(FY85)	7	(FY85)	7
Spares	(FY86/87)	34		34
8-in Howitzer (M2A1/M2A2)		18		18
8-in Howitzer (M201A1)	(FY84/85)	37		62
	(FY86/87)	62		
8-in Howitzer Spares	(FY84/85)	0		34
	(FY86/87)	34		

In-House Production Capacity

Question. Identify all the systems for which the Army plans to establish an "in-house" production base. Specify for each year the programs which will provide the workload for the "in-house" capacity.

Answer: The Army does not currently plan to establish any in-house production base for any Weapons and Tracked Combat Vehicles which have not previously been identified.

5 TON TRUCK PROGRAM

Question: Describe the procurement strategy, to include dates of contract awards, for FY 1985 and FY 1986 procurements.

Answer: The Army plans to solicit for this requirement by two-step formal advertising. The resultant contract will be a fixed price with economic price adjustment, three-year multi-year acquisition with fourth and fifth year priced options (FY 1988 and FY 1989) to be evaluated prior to award. The target date for award of the contract (FY 1985 program year) is 31 January 1986. We anticipate award of the second program year as early as 30 May 1986.

QUESTION: Provide a delivery schedule and deliveries to date for the FY 1984 - FY 1986 program to include the other services' programs as well.

ANSWER: Delivery schedule follows:

		Current Contract		Next Contract		
		FY 84 Pgm	FY 85 Pgm	FY 85 Pgm	FY 86 Pgm	TOTAL
FY85	Oct	40				40
	Nov	404				404
	Dec	332				332
	Jan	212				212
	Feb	187				187
	Mar	366				366
	Apr	392				392
	May	440				440
	Jun	400				400
	Jul	240				240
	Aug	440				440
	Sep	400				400
FY86	Oct	349	65			414
	Nov	200	142			342
	Dec	150	138			288
	Jan	102	294			396
	Feb		360			360
	Mar		342			342
	Apr		396			396
	May		375			375
	Jun		381			381
	Jul		252			252
	Aug		378			378
	Sep		287			287
FY87	Oct		51			51
	Nov					
	Dec					
	Jan					
	Feb					
	Mar					
	Apr			60		60
	May			50		50
	Jun			50		50
	Jul			100		100
	Aug			100		100
	Sep			100		100
FY88	Oct			368		368
	Nov			368		368
	Dec			368		368
	Jan			368		368
	Feb			370		370
	Mar				370	370
FY88	Apr				370	370
	May				370	370
	Jun				370	370
	Jul				370	370
	Aug				370	370
	Sep				151	151
		*4654	3461	2302	2371	12,788

*Delivered to date = (Apr FY 85) = 1933

QUESTION: Provide a delivery schedule and deliveries to date for the Oshkosh 10 ton truck for the entire program.

ANSWER: Delivery schedule follows:

		1st Yr FY 81 Pgm	2nd Yr FY 82 Pgm	3rd Yr FY 83 Pgm	4th Yr FY 84 Pgm	5th Yr FY 85 Pgm	Option FY 86 Pgm	Total
FY82	Aug	8						8
	Sep	36						36
FY83	Oct	24						24
	Nov	38						38
	Dec	38						38
	Jan	100						100
	Feb	123						123
	Mar	51						51
	Apr	66	81					147
	May	33	74					107
	Jun	23	84					107
	Jul	10	111					121
	Aug	30	119					149
	Sep	30	102					132
FY84	Oct	5	117					122
	Nov		103					103
	Dec		105					105
	Jan		127					127
	Feb		129					129
	Mar			132				132
	Apr			120				120
	May			132				132
	Jun			126				126
	Jul			102				102
	Aug			132				132
	Sep			120				120
FY85	Oct			125				125
	Nov			118				118
	Dec			94				94
	Jan			75	51			126
	Feb		1	69	51			121
	Mar		6	81	51			138
	Apr			75	51			126
	May			75	51			126
	Jun			51	75			126
	Jul				108			108
	Aug				132			132
	Sep			32	88			120
FY86	Oct				132			132
	Nov				120			120
	Dec		4		73	67		144
FY86	Jan		16		25	103		144
	Feb		40		25	79		144
	Mar		33	7	25	79		144
	Apr		1	39	30	74		144
	May		15	25	19	85		144
	Jun			11	29	104		144
	Jul				30	112		142
	Aug				40	104		144
	Sep			4	36	100		140
FY87	Oct			40		100		140
	Nov			40		100		140
	Dec			30		24	79	133
	Jan			2		38	138	178
	Feb				25	15	138	178
	Mar					10	138	148
	Apr						138	138
	May						139	139
		615	1268	1857	1267	1194	770	6971

TOW MISSILE SYSTEM

QUESTION: What would be the impact of Congressional direction to establish a conventional (no EOQ) multiyear for the TOW missile if 10-11 percent savings could be negotiated below the FY 1986 budget levels?

ANSWER: It is highly unlikely that a FY 1986 multiyear contract could be executed if Congressional direction is received at the same time the FY 1986 Budget is approved.

Time required to execute is the most important factor, and, in this case, no contractual vehicle is available to continue the production; thus, resulting in a production line shut-down. Action is already in process to obtain and evaluate the FY 1986 missile proposal with contract award scheduled for December 1985.

As stated in TOW Project Manager's Justification for Multiyear Procurement in FY 1984 and again in FY 1985, if a savings of at least 10 percent could be realized, approximately $700 savings per missile may be realized by the authorization of multiyear procurement. However, this is very unlikely, due to the low unit cost already projected for FY 1986, and the contractor already has subcontractors committed. A cost reduction of the FY 1986 procurement would be minimal. This projected savings assumed a minimum economical production rate FY 1987 through FY 1990.

XM81 ALARM

QUESTION: Why have unit costs increased since last year?

ANSWER: Minimal adjustments have been made in unit cost estimates due to refinements in available market price data.

Question: Provide P-40 and P-22 exhibits.

ANSWER: See attached documentation:

Report Control
Symbol DD-COMP (AR)
1092

BUDGET ITEM JUSTIFICATION SHEET

DATE
Jan 85

Appropriation/Budget Activity OPA-3
Other Support Activities

P-1 Item Nomenclature (M96200)
Sim Det Chem Agent Aut Alarm, XM81

	FY 85	FY 86	FY 87	FY 88	FY 89	FY 90	FY 91
QUANTITY	177	600	686	0	0	0	0
COST (MILLIONS)	$ 1.2	$ 4.1	$ 4.6	0	0	$ 0	$ 0

DESCRIPTION:
The XM81 is a training device for the Chemical Alarms. It will be used to support training and doctrine command schools as well as post division level nuclear biol-cml schools. It consists of four (4) receiver assemblies, four (4) antennaes and one (1) transmitter. The concept calls for one simulator to be used in conjunction with four alarms deployed in a tactical situation and that a chemical attack can be simulated by selectively activating the alarms with a radio signal.

JUSTIFICATION:
The XM81 Detector Simulator utilizes a wireless radio link providing realistic field conditions required for training personnel in a chemical warfare environment, interfacing with fielded M8/M8A1 chemical agent alarms.

Reports Control Symbol
DD COMP (AR) 1092

PROGRAM COST BREAKDOWN

DATE Jan 85

Appropriation/Budget Activity OPA-3
Other Support Equipment

P-1 Item Nomenclature (M96200)
Sim Det Chem Agent Auto Alarm XM81

ELEMENT OF COST	IDENT CODE*	FY 85		FY 86		FY 87		FY 88	
		QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST	QTY	TOTAL COST
Hardware Value	B	177	1,086	600	3,799	686	4490		
Engineering Support			104		244		126		
QA Support			9		73		22		
Total Program Cost			1,199		4,116		4638		
Program Unit Cost			6,774		6,860		6,792		

P-1 SHOPPING LIST ITEM NUMBER

PAGE NO

Exhibit P 22

PROTECTIVE MASKS

QUESTION: Does the Army plan to maintain two sources of production for these masks? If not, why not?

ANSWER: The acquisition strategy provides for two producers.

QUESTION: Provide a delivery schedule by quarter for the FY84-87 programs by type of mask.

ANSWER: The following is the current planned delivery schedules:

M17A2/XM40 MASKS (Individual):

Delivery	FY84 Prog (M17A2)	FY85 Prog (M17A2)	FY86 Prog (XM40)	FY87 Prog (XM40)
4Q84	111,541			
1Q85	130,712			
2Q85	0			
3Q85	53,550	10,000		
4Q85	55,997	19,872	1,500	
1Q86		89,325	1,500	
2Q86		29,323	3,000	
3Q86		9,545	2,190	
4Q86			1,900	
1Q87			1,400	
2Q87				
3Q87				
4Q87				
1Q88				
2Q88				3,000
3Q88				24,900
4Q88				33,900
1Q89				60,300
2Q89				25,326
	351,800	158,065	11,490	147,426

M24/XM41 Mask (Aircraft):

	FY84 Prog (M24)	FY85 Prog (M24)	FY86 Prog (XM41)	FY87 Prog (XM41)
3Q85	1,500			
4Q85	3,500			
1Q86	1,760			
2Q86		3,100		
3Q86		3,000		
4Q86		3,000	1,800	
1Q87		3,000	3,000	
2Q87			5,400	
3Q87			8,600	
4Q87			3,200	
1Q88			6,000	
2Q88			2,000	2,700
3Q88				8,100
4Q88				11,200
1Q89				9,400
2Q89				4,600
	6,760	12,100	30,000	36,000

M25A1/XM42 Masks (Tanker's):

	FY84 Prog (M25A1)	FY85 Prog (M25A1)	FY86 Prog (XM42)	FY87 Prog (XM42)
4Q86		8,000	2,400	
1Q87		18,000	9,000	
2Q87		28,400	13,200	
3Q87		30,000	18,800	
4Q87		30,000	10,600	
1Q88		5,600	12,000	
2Q88			4,000	17,600
3Q88				35,400
4Q88				48,600
1Q89				58,200
2Q89				20,700
		120,000	70,000	180,500

CHEMICAL AGENT MONITORS

QUESTION: What are the negotiated unit prices for the FY85 and FY86 contracts in pounds (British) and dollars?

ANSWER: FY85 unit price is $3,800 each or Pounds 2,714 (at 1.41/dollar). FY86 contract has not been awarded (negotiations ongoing, no prices available).

CHEMICAL NEW STARTS

QUESTION: Provide justification materials for the XM20 protection equipment and the XM157 smoke generator.

ANSWER: Justifications for these systems are:

- o The XM20 Collective Protection System is a new line being developed to provide for chemical/biological protection in a simple, reliable and highly transportable operation. No system of this type is currently availabe in the field. Collective protection is required in a Nuclear, Biological, and Chemical (NBC) environment for efficient command and control operations and for use as a Soldier Relief Facility.

- o The XM157 Mechanical Pulse Jet Smoke Generator is being developed due to recent changes in generated smoke screening tactics and doctrine. These changes are due primarily to the Division 86 reorganization where forces are highly mobile and have greatly expanded requirements for large area screening smoke in both the Main Battle Area and the rear Covering Force Area. The current large area screening systems (M3A3/M3A4 Smoke Generators) cannot met Division 86 requirements for mobility. Commencing in October 1986, all fieldings will be the XM157 Pulse Jet Smoke Generator.

BRIDGE ERECTION BOATS

QUESTION: What are the fixed unit prices by year for the 4 year multi-year contract?

ANSWER: The unit price for the Ribbon Bridge Erection Boats is $116,075, excluding the Economic Price Adjustment provisions. Four year multi-year contract commenced in FY82. Prices are for basic hardware only and do not include costs of basic issue items, contractor and Government in-house engineering support, acquisition of cradles (which allow boats to be carried by the transporters), and other support costs such as Royalty Payments.

QUESTION: How many can be bought each year?
ANSWER: Current program allows for the acquisition of 70 boats in FY82; 185 in FY86; 142 in FY87; and 143 in FY88.

RIBBON FLOAT BRIDGE AND TRANSPORTER

QUESTION: What was the recurring fixed unit prices for the multi-year contracts awarded March 1985 on the FY83-85 programs for both the bridge and the transporter?
ANSWER: Award of these contracts is currently scheduled for 28 Jun 85. There is a potential delay in the award for the Ribbon Bridge contract as there is a protest to be resolved.

10,000/50,000 GALLON TANK ASSEMBLY

QUESTION: What were the negotiated recurring unit costs for each of the three years of the FY85-87 multi-year contract?
ANSWER: Contracts not awarded.
QUESTION: If contracts have not been negotiated, when will the contract awards occur?
ANSWER: 10,000 Gallon Tank bids will open 5 June 1985 with projected contract award 5 July 1985. The 50,000 Gallon Tank bids opened 10 May and bids are being evaluated; contract award is projected for 25 June 1985.

PUMP ASSEMBLY, 350 GPM

QUESTION: Have the FY83 and FY85 contracts been awarded? If so, what were the recurring unit costs? If not, explain the delay.
ANSWER: There has been no contract award. Schedule calls for 28 Jun 85 award. Delay due to developing and processing numerous amendments to the solicitation, which were prompted by bidder questions.

600 GPH WATER PURIFICATION UNIT

QUESTION: What were the negotiated unit costs for the FY85 contracts awarded February 85?
ANSWER: Contract not awarded. Bids open 25 June 85 and scheduled contract award is 31 July 85.

ELECTRICAL REPAIR SHOP TRAILER

QUESTION: What were the negotiated unit costs on the March 85 award of the multi-year contract?
ANSWER: The unit cost for the hardware van only is $54,606.

The Test, Measurement, and Diagnostic Equipment (TMDE), which the hardware van carries, has not been procured, which accounts for the difference between van costs and the price estimate reflected on the P-forms.

FULL TRACKED TRACTOR (T-9)

QUESTION: What were the negotiated unit costs on the February 85 and March 85 awards for the 4 year multi-year contract?

ANSWER: Contracts have not been awarded, due to two unresolved protests of award filed with the GAO. Protests were submitted in November 84 during the technical evaluation of offers phase (offers received July 84). Protests center on the exclusion of the "commerciality provisions" (prohibited by the FY84 Appropriations Act) from the solicitation. GAO met with all parties on 16 May 85. The date that the GAO findings will be released is unknown. Requests for "Best and Final" offers can be released immediately upon approval by the GAO.

UTILITY LANDING CRAFT

QUESTION: Who are the bidders on the LCU multi-year and what is the range of unit costs by year?

ANSWER: Bids do not open until 20 Jun 85; therefore, a list of bidders is not yet available.

QUESTION: What quantities were requested by year in the RFP and what provisions are there for annual adjustments in quantity?

ANSWER: The quantities in the Request for Proposal (RFP) are as follows: 2 (FY85), 5 (FY86), 9 (FY87), 10 (FY88) and 14 (FY89). There is a 100% option provision for each contract year.

QUESTION: Explain why the projected FY86 unit costs are increasing while the production rates are increasing?

ANSWER: Projected unit costs decrease from $7,150,000 in FY85 to $4,583,600 in FY86.

6000 LB RT FORKLIFT

QUESTION: Why has the award of the FY83 contract been delayed until February 85?

ANSWER: The initial programmed requirement was for a Rough Terrain Forklift. Subsequent requirements for variable reach technology for stacking/unstacking the Multiple Launch Rocket System (MLRS) missile pods and ammunition pre-packed in 20 foot Military Van (MILVAN) containers were identified. The incorporation of these requirements and staffing of the new specification with all interested Governmental and industrial parties caused a delay in the acquisition. Concerns for the adequacy of testing caused another delay in the approval of the Acquisition Plan, which was accomplished on 2 May 85. Source selection provisions and the competitive testing criteria are being incorporated into the solicitation, due for release 30 June. Commerce Business Daily notification will be placed 7 June. Award of the pre-production competitive test contracts are expected in late October 85 with the final selection and award of the full production contract in July 87. Due to these delays and change in technology requirements, the FY83 funding was transferred. FY84 was a programed funding skip year.

QUESTION: Provide a delivery schedule for the FY83-87 programs.

ANSWER: FY83 funds transferred and FY84 was skip year. After completion of competitive testing, a full production contract utilizing FY85 funds will be awarded in late July 87. First deliveries will commence in October 88 with the first four months being limited to 20 vehicles/month. Full scale production at 60/mo will start in February 89 and continue for 25 months until November 90. Major increases in quantities required are anticipated to be established during the life of the contract as Tables of Organization and Equipment (TOE) units with overaged assets are converted to variable reach technology.

4000 LB ELECTRIC FORKLIFT

QUESTION: Why has the award of the FY83 contract been delayed until February 85?

ANSWER: No award to date; projected for September 1985. Acquisition of this forklift was combined with other similar items as an economic buy and to increase interchangeability of repair parts due to planned award to single manufacturer. Other vehicles were delayed because of conversion of specifications to new technology, which delayed the overall approval of the Acquisition Plan. Solicitation to be released early June 1985 with award in September 1985.

QUESTION: Provide a delivery schedule for the FY83-87 programs.

ANSWER: Production will be 40/month with the first unit equipped Mar 87. Production continues until Apr 89.

AMC RESHAPE

QUESTION: How is the $14.6 million requested to be allocated or invested?

ANSWER: The FY86 program consists of numerous projects which are funded based on Army priorities. Major projects include:

- Electronic Warfare Environment Simulator.
  Acquisition will improve the Army's capability in areas of fault diagnosis and problem resolution and will enhance readiness through improved reliability of battlefield systems.

- Telemetry Ground Stations.
  Provides advanced and rapid telemetry testing of proximity fuzes which are integral to missile and ammunition success. It will allow faster setup time, improved calibration and higher data handling speed.

- Vehicle and Component Chemical Agent Resistant Coating (CARC) Paint System.
  Will provide upgrade to existing painting equipment by installation of vehicle curing rooms, a component painting booth, proportioning

pumps and a tow line conveyor. Acquisition will improve safety and effectiveness in applying CARC and will field combat vehicles which are less susceptible to chemical agents.

- Automated Chemical Analysis Labratory.
  Will provide upgrade of equipment used in the analysis of chemical agent concentrations generated in gas life testing apparatus. This will improve labor intensive testing in support of Production Acceptance, First Article and Surveillance programs. The proposed equipment will support the DOD production program.

- High Speed Laser Photoplotter.
  Will provide upgraded equipment used to transfer design patterns from a computer data base to film which is then used for fabrication of chemically etched patterning for electronic circuitry. The patterns are used for developing prototype and the pre-production quanties of ordnance, signal processing and communication electronic hardware. Failure to upgrade equipment will increase costs and slow progress needed to field effective weapon systems.

- Universal Testing Machine.
  Will provide replacement equipment for testing tensile strength capacity with enlongation and energy capabilities for cordage and webbing components for personnel and cargo parachutes. This will reduce time and labor required to complete in-house testing and will eliminate requirement for contracting with outside labratories.

- Ion Analyzer.
  Provides a system which permits rapid and accurate analysis of aqueous and organic solutions for the presence and degree of concentrations of a large number of cations and anions. This equipment is used to control chromium plating baths used to apply chromium to the bores of gun tubes, thus reducing the number of tubes requiring rework and preventing unnecessary modification or ultimate replacement of the solution.

QUESTION: What are the outyear funding requirements of this program?

ANSWER: The AMC RESHAPE program will continue indefinitely as new areas of productivity enhancement are identified and as modernization through the integration of new technology becomes economically feasible. Projected funding through the near term is: $4.5M (FY87), $5.4M (FY88), $6.4M (FY89), $7.2M (FY90) and $8.0M (FY91).

SWA STRATEGY BASE

QUESTION: Provide a list of the specific quantity of equipment to be purchased for the SWA Strategy Base.

ANSWER: The following equipment requirements for SWA have been identified:

- The Army requires the capability to rapidly deploy a deterrent force to establish a presence in SWA. We have determined this deterrence can best be achieved by (deleted). To meet this requirement, equipment packages are currently being developed for the deployment of brigade-sized task forces.
- The Army also requires (deleted). This equipment is required to discharge the Near Term Prepositioned ships to support combat forces during the early days of a conflict before the sealines of communication are established.
- The specific items and quantities of equipment for each of the above requirements are currently being developed and should be clearly identified by the end of FY 85.

SOUTHERN COMMAND C^3 UPGRADE

[Deleted.]

[Deleted.]

[Deleted.]

TRANSMISSION MEDIA (PACOM)

Question: By service, what are the number of personnel stationed in Japan and Okinawa?

Answer:	U.S. Army:	6,391	(Note 1)
	U.S. Air Force:	26,500	(Note 1)
	U.S. Navy:	24,204	(Note 1,2)
	U.S. Marine Corps:	29,215	(Note 1)
	Aggregate Total	86,310	

Notes:

1. Includes uniformed and civilian employees
2. Includes naval personnel home ported in Japan and Okinawa.

Question: Are the total costs of the Japan Reconfiguration and Digitization Program (JRD) paid proportionally to the assigned strengths? If not, why not?

Answer: No, the JRD Program is broken down into three phases. The Air Force is the lead military department for phase I and III and the Army is the lead military department for phase II. There is no direct correlation between assigned strengths in a geographical location and usage of the JRD assets. The Army and the Air Force, being the predominant land based DCS users, will pay their proportionate share of the JRD Program based on usage and assets paid for by each in other areas of the worldwide DCS systems.

EUCOM C^3

QUESTION. What are the AN/GRC-215 Team Terminal mounted in host nations vehicle used for?

ANSWER. [Deleted.]

DIGITAL STORAGE AND RETRIEVAL ENGINEERING DATA SYSTEM

QUESTION. What are the recurring unit costs in the negotiated FY 1985 and FY 1986 options?

Answer: The following table details the units costs for FY 1985 and FY 1986.

FY	LOCATION	BASIC SYSTEM*	ADDED PERIPHERALS	WARRANTY COSTS*
1985	CECOM (1)	$3,656,037	$ 39,184	$ 490,356
1986	MICOM (2)	--	1,658,392	10,308
1986	AMCCOM (3)	3,238,846	806,892	502,548
1986	AMCCOM (4)	3,227,224	1,450,077	520,176
1986	AVSCOM (5)	3,239,712	909,253	541,152
1986	TACOM (6)	3,240,171	168,930	520,536
1986	ERADCOM (7)	3,238,113	308,309	544,320

NOTES: *Basic system includes hardware, executive software, installation, new equipment training and testing. Warranty includes hardware and software, basic system and peripherals.

1. CECOM added peripherals: A to E Engineering Drawing Scanner.
2. MICOM added peripherals: 49 Graphics Display Terminals with hard copy output; 2 Alpha-Numeric Terminals with printer. Purchase of these optional devices delayed until after acceptance of first system.
3. AMCCOM (Rock Island) added peripherals: 25 Graphics Display Terminals with hard copy output; A to E Engineering Drawing Scanner.
4. AMCCOM Engineering Drawing Scanner.
5. AVSCOM added peripherals: 26 Graphics Display Terminals with hard copy output.
6. TACOM added peripherals: 5 Graphics Display Terminals with hard copy.
7. ERADCOM added peripherals: 7 Graphics Display Terminals with hard copy output; 22 Alpha-Numeric Terminals with printer; A to E Engineering Drawing Scanner.

REMBASS

QUESTION: Was REMBASS type classified standard? If not, why not?

ANSWER: REMBASS is typed classfied (TC) limited procurement based upon urgency (LPU). The system is not TC standard because all components do not have standard Line Item Numbers (LIN's). As soon as standard LIN's are received a letter IPR will be conducted and TC standard approved. Projected TC standard date is 30 Oct 1985.

QUESTION: If the two year multiyear production contract was awarded in March 1985, as scheduled, what were the recurring unit hardware costs for the FY 1985 and FY 1986 programs and how many items are to be bought?

ANSWER: A 2 year multi-year contract was awarded to RCA on 30 Apr 1985. Total cost was $37.399 million. Total components of end items (CEI's) purchased was 3180. Recurring unit hardware costs were $20,077,000. The total buy will equip 6 divisions, 2 brigades, and the training base (Ft. Huachuca and Ft. Sill).

QUESTION: Provide an FY 1985-1986 delivery schedule.

ANSWER: Attached is the RCA delivery schedule by end item (Encl 2).

REMBASS DELIVERY SCHEDULE

FY 1986

	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1. Sensor Monitoring Set AN/GSQ-187			6	6	6	6	6	6	6
2. Monitor, RF PMS Air Div R-2016/GSQ			6	6	6	6	7	10	10
3. Programmer/Code C-10434/GSQ			6	6	6	6	6	9	10
4. Sensor, DT-561/GSQ Magnetic Sensor Head			6	6	8	8	6	13	15
5. Sensor, DT-562/GSQ SEISMIC-Acoustic Classifer			6	6	8	8	8	13	50
6. Sensor, DT-565/GSQ Infrared Sensor Head			6	6	8	8	9	13	16
7. Repeater Radio RT-1175/GSQ			8	9	9	9	9	10	10
8. Antenna Group OE-239/GSQ-187			6	6	6	6	6	6	6
9. Sensor Signal Simulator SM-755			1	1	2	3	3	3	3
10. Mount MT-4825			6	6	4	-	-	-	-
11. AC/DC Power Supply 1/SMS; 1/2 Repeaters			10	10	13	15	15	15	15

REMBASS DELIVERY SCHEDULE

[illegible]

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.	Sensor Monitoring Set AN/GSQ-187	6	6	6	6	6	6	4	-	-	-	-	-
2.	Monitor, RF PMS Air Div R-2016/GSQ	10	10	10	10	10	10	10	10	10	10	10	10
3.	Programmer/Code C-10434/GSQ	-	10	10	10	10	10	10	10	2	5	3	-
4.	Sensor, DT-561/GSQ Magnetic Sensor Head	15	15	15	15	20	20	20	20	20	20	20	20
5.	Sensor, DT-562/GSQ SEISMIC-Acoustic Classifer	50	74	97	100	100	100	100	100	100	100	100	100
6.	Sensor, DT-565/GSQ Infrared Sensor Head	15	15	15	15	20	20	20	20	20	20	20	20
7.	Repeater Radio RT-1175/GSQ	10	10	16	20	20	20	20	20	20	20	20	20
8.	Antenna Group OE-239/GSQ-187	6	6	6	6								
9.	Sensor Signal Simulator SM-755	3	3	3	3	3	3	-	-	-	-	-	-
10.	Mount MT-4825	-	-	-	-	-	-	-	2	6	6	1	-
11.	AC/DC Power Supply 1/SMS; 1/2 Repeaters	15	15	15	15	15	15	15	15	15	15	15	15

REMBASS DELIVERY SCHEDULE

FY [illegible]

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1. Sensor Monitoring Set AN/GSQ-187	[illegible]	[illegible]		-	-	-	-	-	-	-	-	-
2. Monitor, [illegible] DIV [illegible]	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]	-	-	-	-	-	-
3. Programmer/Coder [illegible]	[illegible]	[illegible]	[illegible]	-		-	-	-	-	[illegible]	-	-
4. Sensor, [illegible] Magnetic Sensor Head	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	-	-	-	-
5. Sensor, [illegible]	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]	-	-	-	-	-	-
6. Sensor, [illegible] Infrared Sensor Head	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	-	-		-	-	-
7. Repeater Radio [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	-	-	-	-	-	-
8. Antenna Group [illegible]	[illegible]	-		-	-	-	-	-	-	-	-	-
9. [illegible]			-		-				-	-	-	-
10. [illegible]		-		-	-		-			-	-	-
11. [illegible]	[illegible]	-	-	-	-	-	-	-	-	-	-	-

QUESTIONS ON AMMUNITION PROGRAM SUBMITTED BY GAO

Budget Line Nos. 4,5,6,7,8 and 9
Cartridges, 5.56mm (all types)
(E00701, E01100, E04601, E04602, E04600, E01101)

1. Last year GAO questioned the $57.2 million fiscal year 1985 program for the M193 ball cartridge. Budget back up data indicate the current program is $12.5 million.

   What is the reason for the reduction in the fiscal year 1985 M193 program?

ANSWER:

The fiscal year 1985 program request was reduced to $35.1 million in the Amended budget. This decrement reduced the program to the 60 day war reserve level at the end of the fiscal year 1985 funded delivery period. The fiscal year 1985 program was further reduced during the July 1984 AMP Review. This reduction was based upon the introduction of the M16A2 rifle which uses the M855 ball round. The requirement for the M16A2 rifle ammo had not been defined at the time of the Amended budget submission.

2. The fiscal year 1985 and prior years' undelivered Army programs total 111.6 million rounds of M855/M856 Tracer, linked for the Squad Automatic Weapon (SAW). Production of the fiscal year 1983 program has just recently begun, more than a year after the end of the normal fiscal year 1983 delivery period for this item.

   a. What are the reasons for the delay in production of the M855 Ball/M856 Tracer linked for SAW?

ANSWER:

The reason for delay was an unproven TDP. The largest delay in commencing production for the M855 Ball/M856 Tracer 4-1 linked cartridge was due to the redesign of the cartridge case. The redesign caused an approximate 9-12 month delay. Lake City Army Ammunition Plant (LCAAP) is currently producing hybrid ammunition (US produced M855 Ball and Fabrique Nationale M856 Tracer).

   b. Given the late start on production of this item, is it realistic to expect completion of the fiscal year 1983-85 programs, and the 26.9 million cartridge fiscal year 1986 program, by the June 1987 end of the fiscal year 1986 funded delivery period?

ANSWER:

Yes, based on projected requirements and maximum capabilities of 12.5 M/month, the FY86 and prior programs can be completed by June 1987. In addition, an alternate source, Olin, is being developed to produce an additional 10 M rds/month of the M855 Ball starting in July 1985.

   c. Why is the Army planning multiple shift operation when production experience is very limited?

ANSWER:

Delays have been caused by design and qualification problems, not manufacturing problems. Production/manufacturing of subject item is similar to all types small arms rounds.

d. Will future year programs support multiple shift operation? If not, will personnel have to be laid off?

ANSWER:

Future year programs exceed 1-8-5 shift rate at Lake City AAP. Lake City staffing levels are based on all small arms ammunition programs thru 20mm and would not be affected. Personnel will be shifted from the SAW ammunition production to other production lines averting a personnel layoff.

3. Training consumption of over 25 million rounds is forecast for the fiscal year 1985-86 funded delivery periods, and the M855/M856 inventory at the end of the fiscal year 1986 delivery period is projected to be about 97 million rounds. How many of the SAW weapons will be fielded by the end of fiscal year 1985, and by the end of fiscal year 1986? Will this support the projected training consumption?

ANSWER:

Currently there are 1,105 Squad Automatic Weapons (SAW) fielded. Fielding of an additional 1,738 weapons is planned by the end of 1985. During fiscal year 1986, 5,364 more weapons are planned to be fielded for a total of 8,207 weapons. Based upon the number of Weapons to be fielded the forecasted training requirement is valid.

4. Projected training consumption of M855 ball and M856 tracer cartridges used in the M16A2 rifle, for the fiscal year 1985 and 1986 funded delivery periods is about 33 million rounds and 5 million rounds, respectively. Projected inventories for the end of the fiscal year 1986 delivery periods are approximately 92 million rounds of M855 and 22 million rounds of M856. How many of the M16A2 rifles will be fielded by the end of fiscal year 1985, and by the end of fiscal year 1986? Will this support the projected training consumption?

ANSWER:

The contract for 18,872 M16A2 rifle is scheduled for award in April 1985. None of these will be fielded in fiscal year 1985. In fiscal year 1986, 15,750 M16A2 rifles will be fielded. The fiscal year 1985 program is to support the 1986 training requirements of 16 million (15 million ball and 1 million tracer rounds).

5. Current plans call for completion of all SCAMP line modules by December 1985. The Army has 3.8 million project in fiscal year 1986 program for conversion of two SCAMP lines for M855 ball production.

a. What are the plans for prove-out of the SCAMP lines?

ANSWER:

It is assumed this question refers to plans for proving out SCAMP submodules (manufacturing units) to produce only M193 Cartridges. As each submodule is completed, existing production is transferred from an operation manufacturing unit over to the newly completed unit. The labor and material costs are absorbed by production funds and accepted product is shipped to the field. If further debugging is required, existing SCAMP facilities project funds cover engineering and equipment modification costs.

Other than two bullet submodules, all other SCAMP submodules are scheduled to be operational by the end of 1985. The two bullet submodules will be completed during 1986.

b. Since the Army is planning to convert lines 4 and 5 to M855 production, is it necessary to prove them out on M193 production?

ANSWER:

It is assumed that this question is asking "Why prove-out certain pieces of manufacturing equipment for M193 and then follow that effort with conversion and a second prove-out for the M855?" The question assumes there are five distinct production lines each dedicated to a specific complete cartridge and that complete lines are proven out. SCAMP consists of five each manufacturing units or submodules:

1. Cartridge Case
2. Primer insert
3. Bullet
4. Load and assembly
5. Packaging

Each set of submodules is in its own section of the building, i.e., all case submodules are co-located. The individual cartridges; M193 Ball, M196 Tracer, M200 Blank, M855 Ball, and M856 Tracer; have some components in common and some which differ. In addition, some of the differences are relatively minor and some are major.

In view of the above, two factors should be understood:

a. There are no lines as such. Individual submodules are converted or tooled to produce a given component based on various factors, i.e., it is planned to use load and assemble submodules 1 and 2 to load M855/M856/M196, submodule 3 for blank and 4 and 5 for M193. On the other hand, bullet submodules 4 and 5 are planned for M855 while M193s will be produced on submodules 3, 4, and 5. In addition, once submodules are adapted, it is expected that alternative assignments can be made based on production considerations and priorities.

b. Each submodule is phased into production when its adaption for another product is completed.

There will be no significant duplication or increase in program costs because of first readying some submodules for M193 and then running in the modifications or adaptions for the various other products.

Budget Lines No. 10,12,13,14, and 16
Cartridges 7.62mm (all types)
(E02004, E02002, E02003, E02007, E02200)

1. Will the inventory objective for the M62 Tracer, the 4 Ball/1 Tracer overhead fire, and the M118 Special Ball be reduced for the fiscal year 1987 through 1991 planning period?

ANSWER:

The inventory objective for the M62 Tracer (E02004) and the M118 Special ball (E02200) have been reduced for the fiscal year 1987 through 1991 planning period. However, the inventory objective for the 4 Ball/1 Tracer Overhead Fire round (E02007) remains unchanged.

2. If the answer to question 1 is yes, should the fiscal year 1986 program for these items be reduced?

ANSWER:

The fiscal year 1986 programs for the M62 Tracer (E02004) and the M118 Special Ball round (E02200) should not be reduced. The 1987 through 1991 programs for these items have been realigned to offset these reductions.

3. During fiscal years 1984 to 1986, the Army will provide over one million M118 cartridges to the Director of Civilian Marksmanship (DCM) from Army stocks.

a. Will the Army receive reimbursement for these cartridges?

ANSWER:

In the past Director of Civilian Marksmanship's requirements have been included in the Army's planned buys and reimbursement was not received. Starting in fiscal year 1987 DCM will be required to justify their requirement for a separate budget line.

b. If the Army is reimbursed, when and how will this occur? Will reimbursement be based on full cost of the ammunition?

ANSWER:

The Army will not be reimbursed.

c. Has providing these cartridges to the DCM had an effect on the Army's planned buys for this?

ANSWER:

Since DCM's requirements were included in the Army's planned buys, providing these cartridges has had no adverse impact on the Army's program. As stated previously starting in fiscal year 1987 DCM will be required to justify their requirements as a separate budget line.

Budget Line Nos. 22,23,24,25,27, and 28
Cartridges, .50 Caliber (all types)
(E06400, E06800, E07100, E07302, E07700, and E07200)

1. Army data indicates the inventory will exceed inventory objectives for the M1A1 blank and M17 tracer cartridges.

a. Should the fiscal year 1986 program for these cartridges be reduced, in order to avoid building up excess inventories.

ANSWER:

Yes, based on current acquisition strategy, the fiscal year 1986 program for both items should be deleted as production deliveries through fiscal year 1985 funding delivery period will support projected training requirements and AAO for fiscal year 1986. Recommendation to delete these programs was made during the January 1985 review of the Army Materiel Plan (AMP) FY 87 through FY 91 Program Objective Memorandum. The excess funds on these line items should be realigned to other seriously unfunded ammunition programs in the fiscal year 1986 Budget, e.g. shortfalls in funding exist on other small arms programs such as 5.56mm Blank, 7.62mm Blank, Cal .50 APIT and Cal .50 Ball Linked Ammo.

b. If yes, by how much?

ANSWER:

The total fiscal 1986 program for both the M1A1 blank ($15.0) and M17 tracer cartridges ($4.1) should be deleted.

2. Projected training requirements for the 4 ball/1 tracer M15A2 link, and the APIT linked cartridges are substantially higher than recent actual consumption.

a. What is the basis for the projected increase in training consumption for these cartridges?

ANSWER:

Current projected training requirements, i.e., consumption, are established by the Standards And Training Commission (STRAC) and are based on rounds per weapon times weapon systems in the field. This training strategy has been developed by ODCSOPS with a MACOM review being conducted each year to resolve any STRAC issues. The two training rounds, 4 ball/1 tracer M15A2 linked and the APIT linked cartridges have been CALS controlled during fiscal years 1980 through 1984. To compare actual training loses to projected training losses is totally inappropriate as items have been in short supply for more than five years resulting in the need for constrained training and CALS control.

b. Are weapons available to support the higher training requirement levels if the proposed fiscal year 1986 .50 caliber programs were fully funded?

ANSWER:

Yes STRAC strategy for computing training requirements is based on fielded weapons.

Budget Line No. 29
Cartridge, 20mm, Linked, TP-T, M220
(E08904)

1. Is the Army planning to decrease the fiscal year 1986 program for this item? If yes, by how much (quantities and dollars)?

ANSWER:

Recommendation was made during the January 1985 review of FY87- FY91 Program Objective Memorandum (POM) to buy a quantity of 2,181,000 in FY86. The recommended quantity of 2,181,000 ($7.9) will support training authorizations and a 200 day level of 2,231,000 at the end of FY86 funding delivery period. There is a continued need to procure this item throughout the FY87 - FY91 POM. This recommendation represents a reduction of 2,994,000 rounds ($11.4 million) in the FY86 program. The $11.4M reduction should be realigned to other critical shortfalls in funding within the Ammunition account.

2. Would a decrease in program quantities adversely impact production facilities?

ANSWER:

Any reduction of quantities to the 20mm program will have an adverse impact on production facilities since the line is currently operating at less than the minimum sustaining rate of 800,000 per month. In addition, while quantities go down overhead costs go up as do unit costs which must bear the burden rate since the plant operates on a cost plus incentive fee contract. Program reduction will not cause any personnel lay-offs.

Budget Line No. 35
Cartridge, 30mm Linked, HEDP, M789
(E09900)

1. Only 7,000 of the four million cartridges fundd since fiscal year 1982 have been produced.

a. What are the reasons for the production delay?

ANSWER:

The production of high explosive dual purpose cartridge is new to cannon caliber ammunition and as such manufacturing processes must be tried. This requires time and before achieving success problems will be encountered. Production techniques and methods had to be developed. Special tooling had to be designed, tested and debugged so that the unforeseen problems during the debugging process of the production machines and production process. Technical problems with the M759 fuze inbore explosions, cartridge case burn through, primer leaks, and cartridge case coinage all contributed to the delay of deliveries. During Honeywell's move to Joliet, IL (load, assemble, and pack facility) production was halted for approximately 4 1/2 months. In addition, a gun/ammunition interface problem developed thus requiring establishment of a red team and four months of intensive investigative work.

b. Have the fuze and primer leak problems been resolved?

ANSWER:

The fuze and primer problems have been resolved. Appropriate changes have been made to the manufacturing, assembly, and inspection procedures. Production is continuing.

c. Are the funded undelivered quantities sufficient to meet the Army Acquisition Objective?

ANSWER:

Yes, the quantity of 4,040,000 which was funded from fiscal years 1982 through 1985 is sufficient to meet the Army Acquisition Objective (AAO). The AAO decreased from 9,152,000 during FY86 - FY 90 Program Objective Memorandum (POM) to 3,352,000 during FY 87 - FY 91 POM. Therefore, procurement is required only through FY85.

d. What is the current 1-8-5 capacity for this item?

ANSWER:

The current 1-8-5 capacity at Honeywell for the line is now 75K per month.

Budget Line No. 41
Cartridge, 40mm, High Explosive, Dual Purpose, M430
(E11800)

1. All four services are requesting funds for the 40mm, M430 Cartridge in their fiscal year 1986 programs. The unit costs are $23.84 for the Army, $17.41 for the Navy and Marine Corps and $16.83 for the Air Force.

a. Why is the Army's unit cost so much higher than the others?

ANSWER:

The Army's unit cost is higher because $23.84 is in error and resulted from the wrong data base being used. The Army is aware of this error and is taking action to correct the unit cost.

b. Is the Air Force unit cost too low?

ANSWER:

The Air Force unit cost of $16.83 is too low. The Air Force unit cost should be $17.41 which was provided to them on a P22 dated 28 January 1985.

c. Why are the unit costs different?

ANSWER:

The Air Force, Marine Corps and NAVSEA unit cost is $17.41. The Army unit cost is $17.49 due to a PIP for the M16 link.

2. There is a total of over 7,000,000 cartridges in the services fiscal year 1985 and prior year programs. Virtually none of these have been produced. Given this backlog why are funds needed in fiscal year 1986?

ANSWER:

The FY 85 program is scheduled to be completed 1QFY87. This is three months beyond the FDP. The FY 86 program will be completed sometime in 1QFY88 with the FY 87 program starting the same month and being completed September 1988. With no FY 86 program, and production at Milan Army Ammunition Plant stopped after completion of the FY 85 program, there would be a personnel impact of approximately 150 people until FY 87 production resumed. There would be interim layaway maintenance costs incurred plus startup costs at a low rate until such time as the 1-8-5 rate is achieved. If FY 85 production was stretched to the FY 87 production, there would be an impact of personnel, unknown until actual rate were determined, plus a LAP cost increase of approximately 20%. The newly established MOB Base M549 Fuze producers would have production for one year and then be idle until the FY 87 production started, and possibly lose experienced/trained personnel due to the production shutdown.

3. Production schedules in the budget backup data indicate production at 395,000 cartridges a month starting in December 1985 and completion of the fiscal year 1986 program in October 1987. The maximum capacity of the fuze producer is 340,000 fuzes a month.

a. Where will the Army get the fuzes to support a production level of 395,000 cartridges a month in December 1985?

ANSWER:

The FY 84 fuze deliveries will be completed in January 1986, with LAP being completed in March 1986. The inventory of fuzes and other components at Milan Army Ammunition Plant will allow for increasing the schedule to 395K in December 1985, and maintaining that rate with the three fuze producers.

Dayron Corp. currently has the capability to produce 200K M549 Fuzes per month on a 1-8-5 shift rate. Two additional producers are being established to attain a 200K per month capability each on a 1-8-5. This 600K capability or a major portion of it should be available by January 1986.

b. Are future years' programs large enough to support two fuze producers?

ANSWER:

The future year programs are sufficient to support as a minimum two producers and possibly three. Projected quantities for FY 87 - FY 91 are approximately six million per year.

c. Why are the services requesting funds for 329,000 cartridges which will be delivered during the first month of the fiscal year 1987 funded delivery period?

ANSWER:

Fiscal year 1986 budgeted quantities are greater than shown on the production schedules. Therefore, a larger quantity would remain undelivered after the fiscal year 1986 funded delivery period. Quantities and delivery schedules on P21 are balanced. The projected quantity of 329K to be delivered one month beyond the FDP may be less or nothing beyond the FDP. The 1-8-5 rate for Milan Army Ammunition Plant of 395K per month is a conservative figure and may be greater as Milan gains experience running at high rate production. Furthermore, the number of working days per month during calendar year 1987 may also reduce the quantity beyond the FDP. It is difficult to determine what quantities each service should have reduced their programs for FY 86. The quantities shown on the P21 are allocations to the customers and may change by the time actual production for that FY is accomplished.

Budget Line No. 43
Cartridge, 40MM, Practice Low Velocity, M781
(E13800)

1. The Army, Navy and Air Force are requesting funds for the 40MM, Low Velocity, M781 at unit costs of $2.42, $2.34 and $2.16, respectively. In December 1984, the Army awarded a contract for 1,167,525 cartridges at a unit cost of $1.54. This suggests a lower unit cost estimate should have been used for the fiscal year 1986 program.

a. Why are the Army, Navy, and Air Force using different unit costs? Should they have used the same unit cost?

ANSWER: The unit costs provided all services was $2.42. The Navy was provided the P22 backup documentation on 5 Feb 85 and Air Force on 18 Jan 85 reflecting the $2.42 unit cost. This price was developed using an FY 84 base inflated to FY 86.

b. Why are the fiscal year 1986 unit cost estimates so much higher than the $1.54 unit cost in the recently awarded contract?

ANSWER: The FY 86 budget submission reflected the FY 85 contract price of $1.54 as an FY 84 price, in error, due to funds being on an FY 84 PRON. This was inflated to FY 86.

c. What is a realistic unit cost for the fiscal year 1986 program for each service?

ANSWER: The realistic unit cost for fiscal year 1986 program for all services is $1.86 using FY 85 contract data.

Budget Line No. 43
Cartridge, 40mm, Proactice Low Verlocity, M781
(E31800)

2. The Army is projecting annual training consumption of 4,069,000 cartridges in fiscal years 1986, 1987 and 1988. Actual annual training consumption during fiscal years 1982, 1983 and 1984 was about 1.1 million cartridges per year.

a. Why is projected training consumption almost 4 times higher than past actual consumption?

ANSWER:

The rates of actual consumption during fiscal years 1982, 1983 and 1984 were constrained due to contract problems which limited the supply of available ammunition for actual training until such time as the production base could support the identified total training requirement.

b. Are there enough weapons available to support training consumption at the four million level?

ANSWER:

Yes, the forecasted consumption rate of four million rounds per year can be supported with the weapons currently fielded.

c. If consumption during the fiscal year 1986 and 1987 was to be between one million and two million cartridges, rather than the projected four million per year, would the fiscal year 1986 program be needed?

ANSWER:

The training requirements identified are a product of the Standards of Training Commission (STRAC). These requirements are currently under review of TRADOC and will be presented to the STRAC Steering Committee in May 1985. The Steering Committee findings will be available for the mid-year review of the FY87-91 POM to be held in July 1985, and if current requirements are overstated, adjustments to procurements will be made at that time. It would not be prudent to eliminate any identified overages by cancelling one fiscal year buy in its entirety; rather, downward adjustments would be made across the POM to ensure continuity of procurement and uninterrupted support to the user.

Budget Line Numbers 46-59
Mortar Ammo

The information for all mortar ammunition questions will be available after the Army's mortar acquisition strategy is finalized. A response will be provided on or about 21 June 1985.

Budget Line No. 61
Cartridge, 105mm, HEAT MP T, M456A2
(E23900)

1. Quantities in the inventory and undelivered funded program surpass the Army Acquisition Objective of 561,000 M456A2 cartridges. Why is the Army requesting a fiscal year 1986 M456A2 program?

ANSWER: The serviceable inventory quantity of 380,200 reflected in the September 30, 1984 WARS report includes a quantity of 254,200 of the older M456A1 round. The inventory of the M456A1 is being phased out through the foreign military sales (FMS) channels. Quantities shown in the current program are the modernized M456A2 model, which provides greater accuracy and lethality. Current on hand assets of the M456A2 plus undelivered programs are as follows:

On hand M456A2	126,000
Prior year undelivered	136,000
FMS payback	9,800
FY 85 buy	130,000
Total on hand and due in	401,800
Proposed FY 86 buy	130,000
Less projected losses for test and training	- 16,000
Projected inventory end FY 86 FDP	515,800
Less AAO	- 561,000
Net shortage to AAO of	45,200

2. What is the appropriate unit cost for the M456A2 in the fiscal year 1986 program?

ANSWER: The appropriate unit cost for the M456A2 in FY 86 is $319.64 using the latest FY 84 and FY 85 contract costs inflated to FY 86.

Budget Line No. 62
Cartridge, 105mm, TP-T, M490A1
(E24000)

1. Why is the Army requesting funding for 347,000 cartridges in fiscal year 1986 when a lesser quantity would meet inventory objectives?

ANSWER: The FY 86 procurement of the TP-T M490A1 was increased to offset restrictions imposed against the use of the DS-TP M724 round on the tank training ranges in Europe. Accelerated range rework has negated this requirement and ODCSOPS (DAMO-TRS) is reviewing the total tank training ammunition requirement. Downward adjustments, if required, will be made during the midyear FY 87-91 POM review in July 1985.

2. Does the Army plan to convert more M456 HEAT cartridges to M490's? If so, how many, and what are the Army's future conversion plans?

ANSWER: The Army has no future plans to convert anymore M456 HEAT cartridges to M490's.

Budget Line No. 63
Cartridge, 105 APFSDS-T, TRACE-P, for M833
(E25400)

1. Budget backup data indicates funding for TRACE-P in fiscal year 1984 and 1985 programs. The M833 has been funded since 1982. When will the initial years of production be over?

ANSWER:

1.a. The M833 has been in production since FY83 not FY82. FY86 is the end of M833 initial years of production. NO TRACE-P is programed subsequent to that.

2. Why aren't costs under TRACE-P built into the ammunition budget line?

2.a. TRACE-P funds are assigned a separate budget line for program visibility and management purposes.

3. Are TRACE-P funds being used to remedy the sabot break-up problem?

3.a. Yes.

Budget Line No. 65
Cartridge, 105mm, APFSDS-T M833
(E67901)

1. Why is a fiscal year 1986 buy necessary when production problems have significantly set back the delivery of prior years' programs?

ANSWER:

The FY86 and all prior year programs will be delivered by Sep 87. While this is a slip of four months from the schedule submitted in the FY86 budget, it still provides final FY86 program deliveries within normal 12 month funded delivery period and supports sustainability requirement of 294K.

2. Considering prior production history, isn't it unlikely that the fiscal year 1984 and 1985 programs will be completed on schedule?

ANSWER:

An Engineering Change Proposal (ECP) was approved Jan 85 to provide fix for sabot break-up in projectiles. Initial results of First Article Tests (FAT) incorporating ECP are positive. Production is scheduled to resume May 85. Anticipate FY 84 program to be two months outside Funded Delivery Period (FDP) but expect FY 85 program to be completed within FDP.

3. What production rate would metal parts producers have to sustain, in order to support timely completion of the fiscal year 1984 and 1985 programs?

ANSWER:

In order to complete FY 84 and FY 85 programs by Sep 86, Flinchbaugh would have to sustain a production rate of 12,575/month and Chamberlain a monthly rate of 7,375/month.

4. Question: With the XM900 round scheduled for a fiscal year 1987 procurement and the uncertainty that the fiscal year 1986 program can be produced within the funded delivery period, why not eliminate the fiscal year 1986 program for the M833?

Answer: An Engineering Change Proposal (ECP), approved Jan 85, provided a fix for production problems with projectile sabot break-up. As initial results of the First Article Test (FAT) incorporating the ECP are positive, it is anticipated that production will resume in May 85, and that the FY85 program will be completed within the funded delivery period. The FY86 program is needed to meet the Defense Guidance requirement for the M833. Eliminating the FY86 program would create a 90K shortfall. Also, deliveries of the XM900 would not be able to make up this shortfall until FY89 (FY88 FDP).

Budget Line Numbers 67, 68, 69 and 70
Cartridge 120mm
(E73100, E73200, E73300, E73400)

1. The fiscal year 1986 request increases the total funding to $389.6 million for 317,000 120mm cartridges. First deliveries are expected in July and August 1985 and the first M1A1 tank is scheduled to "roll-off" the production line in August 1985.

a. QUESTION: Please provide a schedule showing how the 120mm ammunition procurement is being synchronized with M1A1 deliveries and fielding.

ANSWER: The following schedule shows M1A1 tank roll-off and ammo deliveries by quarter. The ammunition deliveries meet present minimum tank fielding requirements. New fielding plans are under consideration that will require additional service ammunition. Fielding and ammo/tank requirements are classified and can be provided under separate cover.

		FY85				FY86			
	QTR	1	2	3	4	1	2	3	4
M1A1 Del	(Cum)	-	-	-	6	34	156	381	606
M829	(Cum)K	-	-	-	1.3	5.5	8.5	14	18
M865	(Cum)K	-	-	-	5.7	10.2	20	45	72
M830	(Cum)K	-	-	-	1	1	2	4.5	5.5
M831	(Cum)K	-	-	-	3	7.2	15	20	32

b. QUESTION: How is the Army assuring that the production model ammunition meets all requirements and is fully compatible with the M1A1 tank?

ANSWER: The Technical Data Packages (TDP) for all the cartridges have been throughly reviewed, and testing of these designs has been successfully accomplished including service testing of both training and combat rounds in the M1A1 Tank. All ammunition is being subjected to tests normally employed for initial production, i.e., First Article Inspections and Tests, Cartridge Acceptance Tests and Lot Acceptance Tests. The same vendors used in development are being used for initial production.

c. QUESTION: Have all deficiencies with the 120mm ammunition been overcome and all corrective actions that were necessary been verified?

ANSWER: All deficiencies with 120mm Ammunition were corrected during the development cycle and necessary corrective actions completed.

2. The 120mm ammunition is considerably more expensive than 105mm ammunition. For example, approximately two to five 105mm cartridges could be procured in fiscal year 1986 for the cost of one 120mm cartridge. The greatest differential is in the high explosive cartridges ($2100 versus $363) and ($954 versus $194) for the service and training ammunition, respectively.

a. QUESTION: Provide specific references which have analyzed the cost effectiveness of the 120mm ammunition over the 105mm ammunition for service cartridges.

ANSWER: A Cost and Operational Effectiveness Analysis (COEA) was performed by the Armor School in July 1984 and amended in March 1985.

b. QUESTION: What specific actions are being taken to reduce the cost of 120mm cartridges and the total investment in this ammunition?

ANSWER: The Army has instituted a rigorous cost reduction program which includes a cooperative effort between the US ammunition system contractor, Honeywell Incorporated, and the GE system contractor, Rheinmetall. High cost due to ground rules for making like GE to assure product capability stays high. Cost drivers have been identified and detailed analysis of process and production techniques will be pursued. This exchange of information will lead to the generation of cost reductions. Emphasis is being placed on value engineering programs in the contractor network as well as the Government team. Potential changes will be incorporated and block testing and implementation will be used to reduce acceptance costs. Alternative acquisition approaches are also being evaluated for cost effectiveness. These include competition at the system level and multi-year procurements.

c. QUESTION: Has the army evaluated the potential for buying very limited quantities of the training cartridges until any planned cost reduction effort can be realized and what training approaches are being planned to minimize the use of these cartridges?

ANSWER: Crew proficiency and survivability are directly related to thoroughness of training. Current planned buys for training cartridges support pipeline and supply for users minimum training requirement.

*Standard cost for M490 is $194.

2. d. Question: Can the M1 tank and 105mm training ammunition be used to train operators for the M1A1 and if not provide specific reasons?

ANSWER: Approximately 80% of all training at the institutional level is accomplished with the M1 and the 105mm ammunition. At the unit level, crews must train on the systems they are equipped with and will fight with.

e. QUESTION: Please identify existing competition in the 120mm ammunition program and efforts to increase this competition.

ANSWER: Prime contract is sole source; however, there is competition at the subcontractor level for all components except propellant; explosive; combustible cartridge case; load, assemble and pack (LAP) and fuze. The propellant and LAP are being done at GOCO plants under direct contract from prime to GOCO plant operating contractor. Explosive is supplied GFM. Due to the very low quantities for the M830, it does not appear feasible to introduce a competitive source for the fuze. A second source for combustible cartridge cases has been started by the system contractor under the FY85 Buy.

3. QUESTION: A 105mm. Enhancement Program is being conducted, which based on a November 1984 demonstration test, will provide the 105mm systems with an armor piercing capability comparable to the 120mm system using the M829 cartridge. This program includes the XM900 cartridge and XM24 gun tube (extended M68). The cartridge and tube are scheduled for type classification in December 1986 with fielding of the XM900 in 1988. Production prove-out funds could accelerate fielding of the XM900 by about 1 year if provided.

a. What priority is the Army placing on accelerating the XM900's fielding?

ANSWER: The XM900 is one of the Army's highest priority programs and fielding is consistent with approved plan to field upgraded tank system.

QUESTION:

b. Could the XM24 gun tube fielding be accelerated and what would be required?

ANSWER: The XM24 gun tube fielding is paced by designing and testing of vehicle modifications. These activities are on a telescoped schedule and acceleration is not recommended.

QUESTION:

c. What capability will the XM900 cartridge have against the current threat (compared to 120mm system) and how much additional capability will the XM24 tube provide?

ANSWER: The combination of the XM900 cartridge and XM24 gun tube will provide a capability equal to the current 120mm system with the M829 cartridge. The tube and cartridge each provide approximately 50% of the increased penetration.

4.

a. Can development of armament for the 105mm systems keep peace with 120mm armament in terms of the future threat?

b. Is any anticipated greater capability against the future threat which the 120mm system is expected to provide over the future 105mm armament actually needed or will maximum development of both systems provide the U. S. with an overkill capability not supported by current threat data?

c. Will future 105mm armament be capable of defeating all projected Soviet tanks and if this is true would the 120mm systems provide an overkill capability?

ANSWER:

(Questions 4.a.-4.c.) Given the same level of technology, the 120mm will always be more capable than the 105mm. Using conventional kenetic energy and chemical energy technologies, only the 120mm can defeat the future threat. Efforts to increse the performance of the 105mm are dependent upon technology breakthroughs in unconventionally designed munitions and are considered high risk. Should such a breakthrough occur it may be possible for the 105mm to defeat the future threat. That same technology applied to the 120mm could provide some overkill capability against the future threat.

d. In the event 105mm armament cannot meet future threat and thus become obsolete and ineffective, what options would be open to the Army to overcome this potentially serious situation?

ANSWER:

4.d. Several options will be available. These include: (1) upgun to 120mm (2) upgun to a future armament system (3) Replace with M1A1's (4) Replace with future weapons system (5) Assign the fleet missions against less capable targets.

Budget Line No. 71
Projectile, 155mm, HE, ICM, M483A1
(E28100)

1. In response to the questions last year concerning delivery of 95,000 projectiles after the fiscal year 1985 funded delivery period (FDP), the Army provided the following response.

> "Since the submission of the February 1984 M483 schedule, actions have been taken to increase the production rates at projectile metal parts and LAP producers to bring the programs back into the funded delivery period."

Yet, budget backup data now shows that there are 190,000 projectiles to be delivered after the original fiscal year 1985 FDP (ending September 1986 based on a 12 month procurement reorder leadtime). However, the data shows delivery within the funded delivery period, based on the Army's increase in procurement reorder leadtime to 15 months. It appears that the additional 3 months was needed because of production backlog and not to provide more administrative time for awarding contracts. Also, according to an Army official, grenade, projectile and LAP, contracts for the fiscal year 1985 program were awarded by January 31, 1985. Please comment.

ANSWER:

The reorder leadtime for the M483A1 was changed to 7 month administrative and 8 months production based on two factors. The high dollar value of the projectile MPTS contracts may require a "Should Cost Study". This study must be completed and negotiated prior to contract award. Estimated time to award contract is five to six months. The fiscal year 1985 contracts did not require a study due to recent study on the fiscal year 1984 contracts. There may be one required for fiscal year 1986. The LAP, projectile MPTS, and grenade contracts are not as much concern as the other components, i.e. adapter, metallic and non-metallic hardware, tape stiffener assy, and lifting plug that must be awarded by competition. Projectile MPTS and grenades are awarded to MOB base producers with production on-going year to year. As an example, the fiscal year 1984 quantity for the adapter was not awarded until October 1984. This was due to numerous Pre-Award Surveys, of which many had negative team decisions, but had to wait for the SBA decision. This was similar to contract awards for other components. Fiscal year production cannot be started in October when contracts are awarded to new contractors with only a 4 month production leadtime. As of 28 March 1985, the entire fiscal year 1985 program quantity for the following components have not been awarded: Tape stiffener assy, adapter, non-metallic hardware and lifting plugs.

2. Production of the fiscal year 1984, 1985, and 1986 programs is scheduled at a much higher rate than past actual production.

a. Given past production levels and problems with getting the Mississippi AAP going, aren't projected production rates optimistic?

ANSWER:

Yes, the critical months that will determine if Mississippi Army Ammunition Plant can produce is April and May 1985. This is the period when MSAAP will be producing from newly manufactured projectiles. MSAAP has met this schedule through March 1985 using projectiles that have accumulated during debug and proveout of equipment.

b. Producers of empty projectiles for the M483A1 are operating at a high level, and the Mississippi Army Ammunition Plant has yet to demonstrate that it can maintain projectile body production on a continuous basis for even the current minimal quantities. If the Mississippi AAP cannot produce empty projectile bodies as current schedules estimate, will there be enough empty metal projectiles available for loading at all LAP facilities including the Mississippi AAP?

ANSWER:

There is insufficient capacity available to support the other LAP facilities and Mississippi Army Ammunition Plant (MSAAP). MSAAP must become self sustaining to operate. The projectile MPTS contractors must also satisfy the ADAM, RAAM, and M825 requirements in addition to the M483 LAP production at Milan Army Ammunition Plant and Kansas Army Ammunition Plant.

3. The Mississippi Army Ammunition Plant is a new facility. Production capacity is restricted because it does not conform to clean air requirements during operations.

a. When will the necessary modifications be completed to lift restrictions on production capacity?

ANSWER:

There has never been any restriction on the production capacity of MSAAP due to failure to comply with clean air requirements. There is currently, however, a compliance agreement on the mechanical (power) plant and a compliance order on the forge room pollution control system (smog hog). These actions resulted out of the Army community "projecting" the emissions levels, for these two sources, based on best available control technology. Subsequent operation indicated that the projections were too optimistic and could not be achieved on a reliable, repeatable basis.

A letter to the state of Mississippi Department of Natural Resources, dated 27 March 1985, by the plant Commander, indicated that the mechanical plant would be in compliance by June 1985 and that the smog hogs are currently operating within emissions limits.

b. Why weren't the problems anticipated and resolved during the construction phase?

ANSWER:

These units were designed and constructed based upon best available control technology (1978). This technology is the latest state-of-the-art in pollution abatement and subject to adaptation to individual applications. The application of smog hog technology to forge room emissions is unique to the Government. Due to the "projection" of the capabilities of the respective systems, their actual performance could not be determined prior to actual start-up.

In addition, this system was designed in 1978 pursuant to the enactment of the Clean Air Act Amendments of 1977. These amendments established a new process for obtaining a construction permit for a new pollution source. The new amendments had provisions for "preventing significant deterioration" of air quality in areas where the air is cleaner than required by the national ambient standards. The Mississippi plant is located in a "pristine" area and the current permitted limitations are designed to comply.

4. Is there a sufficient supply of RDX/HMX (a component of composition A-5) to meet M483A1 requirements along with all other DOD-wide fiscal year 1986 program needs?

ANSWER:

Total requirement for Comp A-5 for all ammunition items is approximately 10 million pounds for FY 86. Holston Army Ammunition Plant has the capability to produce this quantity.

Budget Line Nos. 76 and 78
155mm Area Denial Artillery Munitions (ADAM)
155mm Remote Anti-Armor Mine System (RAAMS)
(E67200, E67502)

ADAM and RAAMS

1. In response to questions on the fiscal year 1984 and 1985 programs, the Army stated that increasing the procurment reorder leadtime from 12 to 15 months would allow the Army to deliver the program quantity within one month after the end of the funded delivery period. The backup data for fiscal year 1986 shows a 20 month procurement reorder leadtime for the fiscal year 1985 and 1986 programs. It also shows a 17 month procurement reorder leadtime for the 1984 program with a 15-month rather than the standard 12-month delivery period.

   a. Why did the Army increase the procurement reorder leadtime from 15 to 20 months?

ANSWER:

The procurement reorder leadtime revision from 15 to 20 months was a corrective action in the administrative portion of the total leadtime, to reflect historically realistic time frames for the administrative methods required for total contract awards of all components comprising the end item configuration.

   b. Why is the leadtime for the fiscal year 1984 program 17 months?

ANSWER:

The fiscal year FY 84 program is involved in the transition of revised leadtimes. The FY 84 program was based on an unrealistic 15 month reorder leadtime. The FY 85 and FY 86 programs are based on the realistic 20 month reorder leadtime. The 17 month reorder leadtime reflects the transition. To conform to the previous procurement leadtimes would result in a 3 month break in projected deliveries after completion of the prior year program.

   c. Why is the fiscal year 1984 funded delivery period 15 months rather than the typical 12 months?

ANSWER:

The answer to 1.b. addresses the leadtime transition issue which results in the questioned 15 month funded delivery period.

d. The fiscal year 1984 program is scheduled for delivery through May 1986. It appears that such a schedule precludes delivery of the fiscal year 1985 program until June 1986, 20 months after the start of fiscal year 1985, hence a 20 month procurement reorder leadtime. Please comment.

ANSWER:

The fiscal year 85 program has a 20 month reorder leadtime, which now is the official reorder leadtime for these items.

e. There are several other items in the fiscal year 1986 request for which the procurement leadtimes have increased. Why have they increased?

ANSWER:

The procurement leadtimes have been increased to realistic levels. The revised leadtimes for all items reflect realism and provide more accurate forecast for actual completion dates of acquisition programs, based upon the various procurement and production methods used to acquire all of the components comprising the ammunition end item.

ADAM AND RAAMS

2. In response to prior years questions the Army stated that contractors producing key components are base producers with a great amount of experience. If so, why aren't procurement reorder leadtimes remaining constant or decreasing rather than increasing?

ANSWER:

The procurement reorder leadtimes have changed due to the administrative method of contract award for the components of an entire end item requirement as indicated in preceding question and answer 1e.

ADAM

1. The production schedule in budget backup data shows about a five month break in delivery of pacing components for the ADAM between the fiscal year 1984 and 1985 programs.

a. Why does this break occur?

ANSWER:

Production will be accomplished on a 1-8-5 schedule which is the most economical rate. Because this rate is 72,000 per month, the requirement for the annual buy will be produced in approximately seven months. Then will cause a five month break in production of this pacing component but no break in deliveries to the end item.

b. What actions can the Army take to eliminate this break?

ANSWER:

The break will not be eliminated unless the Government wants to pay Honeywell to stretch out the HTF contract deliveries. Negotiations are underway and the expected final result is the Government and Honeywell will reach an agreement on a reduced monthly delivery rate to maintain the probability of continuity of production.

c. If the break is eliminated would the procurement reorder leadtime be reduced to 15 months?

AMSWER:

The reorder leadtime cannot be reduced at this time due to the many variables indicated in preceding answers regarding the realistic leadtime applications based upon the procurement and production methods and capabilities applied to all components and load, assemble and pack for the end item.

ADAM

2. Has the problem which caused duds during ballistics testing of the ADAM been identified and resolved? If not, should production be stopped until it is resolved?

ANSWER:

The problem(s) which have caused duds during ballistic testing of the ADAM has not been isolated.

The overall system reliability for all material tested during CY85 is 80 percent. Seven lots of M32, 155MM Area Denial Artillery Munitions (ADAM) have been tested since January 1985. The overall dud rate for these lots is 10 percent. However, 80 percent of all duds occur when the mine deploys zero sensors. A major Product Improvement Program (PIP) is scheduled to start in May 1985.

One area the PIP will address is tripline deployment and its relationship to duds.

Therefore, a recommendation to cease production would be premature.

RAAMS

1. Why is the Army planning to produce RAAMS on a multishift basis for about a two year period?

ANSWER:

The RAAMS complete projectile assembly operations are not going to be operated on a multishift basis. Iowa Army Ammunition Plant has the capability of assembling 7,900 each RAAMS Projectiles on a 1-8-5 shift basis. The main charge pressing operation capability is the limiting factor for the entire production process. Pressing operations would be on a 2-8-5 shift basis in support of 1-8-5 basis for Load, Assemble and Pack (LAP).

RAAMS

2. How many additional personnel will be required to operate on a multishift basis?

ANSWER:

End Item LAP does not require multishift operations. The main charge operation would require a multishift basis to support the LAP schedule. The additional personnel required for this pressing operation would total about 8-10 people.

RAAMS

3. Will the additional personnel have to be laid off after production drops to a 1-8-5 basis?

ANSWER:

No personnel lay offs are foreseen at this time. The future employment of all personnel within the government-owned/contractor-operated facilities is primarily dependant upon the total overall activity level of that individual facility at a specific point in time.

RAAMS

4. Is sufficient press capability available to support multi-shift operation of the RAAMS and maintain production of other scatterable mines?

ANSWER:

Sufficient press production capabilities to support the RAAMS and other scatterable mine item programs will be attained with the completion of the current FASCAM presses facility projects.

RAAMS

5. The production schedule in budget backup data shows delivery of pacing components for the fiscal year 1986 program to begin in October 1986. This suggests that deliveries of the complete RAAMS projectile could start earlier than the scheduled June 1987 first delivery. However, such earlier delivery appears precluded by available production capacity being absorbed by the fiscal year 1985 program. Please comment.

ANSWER:

The production program for FY 86 first delivery begins to the customer in June 1987, 20 months leadtime from funding. The production program for FY 85 first delivery begins to the customer in June 1986, 20 months leadtime from funding. The FY 85 production program is in production for 12 months. The possible early delivery of some component parts does not alleviate the current projectile assembly production capability restraints pending additional facilitization.

RAAMS

6. The Army's response to last year's question regarding approximately 88,000 safety and arming (S&A) devices in reject status stated that the defective components were being reworked. However, according to Army officials, there are currently 150,000 S&A devices in reject status. Please comment.

ANSWER:

The increase in the number of defective S&As is due to receipt of additional nonconforming hardware (high-resistance). The grounding clip has been redesigned and the reject rate has dropped from 10% to less than .5%. Concerning the 150,000 S&As in reject status, an engineering test has determined that the resistance requirement can be opened up to 10 ohms with no degradation of performance. Iowa AAP is screening the rejected S&As; it is anticipated that 80-90% of these will be within acceptable limits. On-going engineering studies are looking at ways to qualify/rework the remaining S&As.

Budget Line No. 80
Copperhead 155mm, Projectile
(E67600)

1. The Copperhead's reliability, according to a program office chart, has increased from 82.1 percent in 1982 to 92 percent in 1984. This exceeds the Secretary of Defense mandated minimum level of 80 percent reliability. The reliability estimates are based on firing 205

projectiles. Another chart shows that 1983 deliveries are about 34 percent complete and 1984 deliveries are not scheduled to begin until June 1985.

a. What are the major contributing factors to Copperhead's improving reliability?

ANSWER:

In 1982 a Reliability Improvement Program was initiated. A key element of this program was the "soft recovery" firing of Copperhead whereby the round was subjected to the maximum gun (9,000 G's) forces, but allowed a "soft" (parachute) landing so the round could be recovered in good condition and live sequenced in the lab. As a result of this technique, a number of previous undetected problems or problems that had been "masked" by other failure modes were identified and corrective actions applied. The initiation of this testing program, its resultant problem identification and the corrective actions applied to production, was the major factor in improving Copperhead's reliability.

b. What specific actions were required to increase Copperhead's reliability level above the 80 percent mandated and has the Army determined this is cost effective?

ANSWER:

Specific actions taken to increase reliability were the addition of a dual starter battery, improved cabling, more precise control of assembly for areas that are high "G" force sensitive, special test for voltage regulators, and tighter sub contractor and vendor controls.

The Improved Reliability Program is very cost effective when viewed from the additional number of reliable projectiles obtained. For example, a 10% gain in reliability (from 82% to 92%) for the FY83/84 quantity of 2800 rounds would yield 280 additional rounds worth nearly $11 million.

c. What specific actions are planned to assure the Copperhead's reliability remains high?

ANSWER:

The Soft Recovery Program has been continued as part of lot acceptance testing. Analysis of these fired rounds gives indication of any problems or potential problems before they can affect reliability. Continued emphasis is being placed on process controls and both Martin Marietta and government inspectors maintain close monitoring of critical process areas.

The contractor has an agressive production line corrective action program that identifies problems/potential problems, applies corrective action and follows-up to assure the problem has been solved.

The production contract includes both incentives and penalties for reliability achieved during lot acceptance testing.

d. What confidence level can be placed on the reliability estimates since only 203 projectiles have been fired?

ANSWER:

In addition to the 205 projectiles fired for lot acceptance tests (173 hit, or 84.4%), 71 additional projectiles were fired to support other system operational tests (FIST-V, AHIP, RPV, Japanese FMS, etc.) and the results of these firings were consistent with the lot acceptance test results. Further confidence is obtained from the analysis of soft recovery rounds fired to date. Data from the Soft Recovery Program is consistent with the live firing results. In summary we are very confident of our lot acceptance test result reliability based on all our live firings to date and our Soft Recovery Program. This translates to an 81% reliability at a confidence level of 90%.

e. What reliability is the contractor required to achieve before a lot is rejected?

ANSWER:

For FY85 an individual lot can be rejected if its reliability is less than 67%.

f. If the relibility is lower than required what corrective actions can be taken on those projectiles produced?

ANSWER:

The contractor is responsible for identifying the problems, developing the appropriate corrective action, reworking the lot and re-submitting it for lot acceptance tests. If the contractor is unable to rework the rounds to meet the required relibility, a new lot would have to be submitted. All these actions are at this own cost under the terms of a firm fixed price contract.

g. What actions are taken to reduce costs for reliability tests since even firing only 205 projectiles costs about 96.4 million based on Copperhead's 1982 $31,099 unit cost?

ANSWER:

The Lot Acceptance Program has been modified since 1982 to convert from a straight 13 rounds per lot sample to a sequential plan which allows firing of fewer rounds provided the initial rounds fired have higher reliability.

To assure confidence based on the smaller number of rounds, the flight tests are supplemented by soft recovery round analysis.

In summary our revised Lot Acceptance Program while maintaining our confidence in reliability will save us $27M over the life of the program by firing fewer rounds through sequential sampling.

3. The Copperhead Program Manager believes the contractor can currently produce 450 rounds per month while 575 per month will be required to produce the fiscal year 1986 buy. Further the contractor may need to procure additional equipment or use multiple shifts.

a. What is the highest actual production rate achieved per month to date?

ANSWER:

The highest actual production rate for Copperhead was 350 rounds per month.

b. What studies/analysis have been conducted to support the contractor's capability to produce at 575 projectiles per month?

ANSWER:

During establishment of the Initial Production Facility in the 1978 to 1980 timeframe, a number of studies were performed looking at production rates of up to 700 projectiles per month. These studies identified personnel, production and test equipment, and facilities required to meet various production rates.

Based on the experience gained during actual production, these studies have been updated by identifying actual "choke points," refining the line balance and reviewing subcontractor and vendor capabilities. Martin Marietta has recently conducted a detailed review of existing capabilities and requirements to achieve higher levels of production up to 700 rounds per month.

c. If the contractor required additional equipment or multiple shifts will the cost of Copperhead increase?

ANSWER:

There should be no increase in the unit cost of Copperhead since the economies of higher rate should offset any specific areas of additional cost for increased capability.

d. What impact could the increased production rate have on the reliability of the Copperhead?

ANSWER:

Increasing the rate of production may adversely affect reliability on any production program if measures are not taken to assure that quality is not compromised to achieve schedule.

For Copperhead a number of measures have been taken. First a comprehensive worker/supervisor training program has been established to assure that new workers are fully trained and sensitive to quality and reliability factors. Secondly, the Quality Assurance Directorate has the full support of the contractor's top management that quality and their "commitment to excellence" is the highest priority during production build-up. Third, both the contractor and government inspectors are sensitive to critical areas that could adversely affect quality. Fourth, the contractor has set up an extensive quality program for major subcontractors and vendors. The contractor is working directly with their quality organizations to assure maintenance of high quality standards during production build-up.

In summary we feel all these actions will assure the continuation of Copperhead's high reliability.

4. Considerable savings ($130.8 million) are anticipated through Copperhead cost reduction efforts and further savings may be achieved through a second producer. The estimated savings is based on projectiles produced since July 1983. The unit cost for the fiscal year 1982 procurement was $31,099 and for fiscal years 1985 and 1986 $38,248 and $34,055, respectively.

a. Please explain, what appears to be an incongruity between the Army's Copperhead cost reduciton efforts and the projected increased cost of Copperheads in fiscal years 1985 and 1986 program over these procured in the fiscal year 1982 program.

ANSWER:

FY82 through FY86 total program quantities, dollars and unit costs are as follows:

FY	QTY	TOTAL PROGRAM	TOTAL PROGRAM UNIT COST
82	3957	$154.5M	$39.0K
83	1220	5.0M	45.1K
84	1580	73.7M	46.6K
85	5250	200.8M	38.2K
86	6900	235.0M	34.1K

FY83 and FY84 higher unit costs represent the cost penalty for much lower rates of production compared to the FY82 contract. Also FY84 through FY85 include investments in cost reduction efforts which add to thos years unit cost, but provides for far greater savings in future years. The FY86 Program unit cost compares favorably with FY82 when considering its reduction has offset four years of inflation due to an agressive cost reduction program.

b. What is required to introduce competition into the Copperhead Program through a second producer?

ANSWER:

Increased program quantities would be required to justify competition.

Budget Lines Nos. 82, 83, 84, 85, and 89
155mm Propelling Charges, M3A1, M4A2, M203, M119A2
(E27201, E27301, E27303, E27100) and
8 inch Propelling Charge M188A1 (E29202)

1. The fiscal year 1985 propelling charge program is much larger than the fiscal year 1984 program and the proposed fiscal year 1986 program. Further, the workforce at the Indiana Army Ammunition Plant will have to be increased substantially to produce the fiscal year 1985 program within the fiscal year 1985 funded delivery period.

a. The fiscal year 1985 request for propelling charges was large and the Army allocated $47.2 million of omnibus funding for war reserves to propelling charges. Why is the fiscal year 1985 program so large relative to the fiscal years 1984 and 1986 programs?

ANSWER:

1. The large FY 85 request for propelling charges was required to balance the propelling charge inventory to the projectile inventory at the end of the FY 85 funded delivery period (FDP). There was a large shortfall of 155mm all types and 8 inch extended range propelling charges at the end of the FY 84 FDP. We were approximately 1,181,000 155mm all types propelling charges short versus on hand projectiles and approximately 185,000 extended range M188A1 8 inch propelling charges short to the projectile requirement. The FY 86 program is considerably smaller since it only has to match new procurement of projectiles.

b. How many additional workers would be needed at the Indiana Army Ammunition Plant and other plants to deliver the fiscal year 1985 program as shown on the production schedule in the budget backup data?

ANSWER: Approximately 250 to 300 additional personnel would have been required to produce the FY 85 program. However, Dept of Army has approved and issued a waiver to produce the FY 85 program which includes the M119A2, M188A1, M4A2 and M3A1 Propelling Charges over a two year period. Consequently, this will stabilize the direct labor work force.

c. Which propelling charges would require multiple shift production at the Indiana Army Ammunition Plant in order to deliver the fiscal year 1985 program as shown on the production schedules in the budget backup data?

ANSWER: It was anticipated that the 250 to 300 increase in direct labor personnel would have been utilized to man a second shift operation for the M188A1 propelling charge. The Dept of Army waiver to allow extension of the Funded Delivery Period (FDP) has eliminated the need for a multiple shift production.

d. What impact will the most recent explosion at the Radford Army Ammunition Plant have on the delivery of the fiscal year 1984, 1985, and 1986 programs for both the Army and Marine Corps?

ANSWER: The Nitroglycerin (NG) incident at Radford AAP will have no impact on the Indiana AAP delivery schedule of the M188A1 Propelling Charges. Alternate sources of supply for NG and the waiver to extend the FY 85 FDP has relieved the possibility of impact.

2. In developing the propelling charge program, the Army attempts to maintain a balance between inventories for propelling charges and projectiles which use these charges. Please provide projected inventories of the M3A1, M4A2, M203, M119A2, and M188A1 propelling charges and the projectiles which use these charges after both the fiscal year 1985 and fiscal year 1986 programs.

ANSWER:

2. The projected inventories of the M3A1, M4A2, M203, M119A2, and M188A1 propelling charges and the projectiles which use these charges for both fiscal year programs 1985 and 1986, are reflected below:

PROP CHG	PROPELLING CHARGE INVENTORY	PROJECTILE INVENTORY	PROPELLING CHARGE INVENTORY	PROJECTILE INVENTORY
	FY 85		FY 86	
a. M3A1	2,257,000	12,856,000	2,393,000	13,187,000
b. M4A2	6,281,000	12,865,000	6,512,000	13,187,000
c. M203	75,000	12,865,000	119,000	13,187,000
d. M119A2	4,808,000	12,865,000	4,898,000	13,187,000
e. M188A1	966,000	1,540,000	1,087,000	1,417,000

3. The tentative fiscal year 1986 program appears to support a much lower production level than the fiscal year 1985 program.

a. How many of the additional personnel hired to produce the fiscal year 1985 program within the funded delivery period would have to be laid off because of a smaller fiscal year 1986 program?

ANSWER: Prior to Dept of Army's waiver to extend the funded delivery period the approximate reduction in work force would have been 300. Due to the production of the FY 85 program over a two year period the personnel levels will be stabilized.

b. Given the good inventory position for propelling charges, why doesn't the Army extend fiscal year 1985 production into the fiscal year 1986 funded delivery period by operating on a single shift basis? It seems that this would preclude the hiring, laying off, and multiple shift operations associated with trying to complete the fiscal year 1985 program on time.

ANSWER: A waiver to produce the FY 85 program over a two year period has been issued by Dept of Army. This has eliminated the need for hiring with subsequent layoffs and multiple shift operations. This waiver includes the M119A2, M188A1, M4A2 and M3A1 Propelling Charges.

c. If the fiscal year 1985 program is extended, by what quantities could each of the propelling charges in the Army's fiscal year 1986 program be reduced?

ANSWER: Since there is such a small FY 87 planned program for M119A2 Prop Charges, if allowed to deliver FY 86 and prior approximately 2 months out of FDP, no reduction would occur. This is the only prop charge anticipated to be affected by the waiver.

4. Will new percentage of mix figures be used in computing propelling charge requirements next year? If yes, what effect will applying these new allocations have on projected requirements and inventory positions for the M3A1, M4A2, M203, M119A2, and M188A1 in future years?

ANSWER:

4. Percentage of mix figures are provided annually by Deputy Chief of Staff for Military Operations and Plans (ODCSOPS). At the present AMCCOM is unaware of any anticipated changes in the mix figures for next year.

5. What is the realistic 1-8-5 production capacity that is currently attainable under a non-mobilization situation for the combined M3A1 and M4A2 production on line 5A at the Indiana Army Ammunition Plant?

6. What is the realistic 1-8-5 production capability that is projected for the fiscal year 1986 funded delivery period for the production of the M3A1 and M4A2 propelling charges on line 5A?

ANSWER: The 1-8-5 rate for both the M3A1 and M4A2 is 50K/month, however, they cannot be run on the same line (bag house) at the same time. The current combined 1-8-5 rate is 50K/month. The projected 1-8-5 rate will exceed the current based or planned new equipment and production process improvements. The production rates for prop charges are determined by the number of bag loading houses utilized and the number of shifts in operation. The product mix of all charges is instrumental in determining the rate for the individual charge and the line roll up at any given time. The rates provided on P21 are historical data based on mobilization capacity which in this case has commonality with their peacetime rate. Indiana AAP has been requested to attempt to develop peacetime rates but this task of individual rate development will always be predicated upon product mix at the given time.

Budget Line No. 92
Fuze, Mechanical Time Superquick M577/577A1
(E61302)

1. What is the projected inventory of the M577/M577A1 mechanical time superquick fuze at the end of the fiscal year 1986 funded delivery period (September 30, 1987)?

ANSWER:

1. The projected inventory of MTSQ/MT fuzes at the end of FY 86 is 7,197,000. This projected inventory includes M577/M577A1 and the older vintage fuzes MT, M548 and MT, M565.

2. What is the projected inventory of the projectiles which use this fuze at September 30, 1987?

ANSWER:

2. The projected inventory of projectiles at the end of FY 86 funded delivery period is 6,911,000. Note that fuze procurement is based on a factor of 105 percent of the projected projectile inventory.

3. What is the realistic 1-8-5 production capacity for each fuze producer in a "peacetime" environment?

ANSWER:

Bulova Systems and Instruments Corp. - 53,000 each per month

Hamilton Technology Inc. - 51,000 each per month

4. Why is the Army planning to accelerate fiscal year 1986 program production to the rate of 164,000 per month and then drop production to about 128,000 per month thereafter?

ANSWER:

Current programs are three months beyond the funded delivery period. Increasing the monthly production rate to 164,000 will bring the M577/577A1 back within the funded delivery period with the FY 86 program. The 128,000 per month represents the FY 87 program requirements.

5. Since the Army plans to discontinue procurement of the M577A1 and replace it with the XM762, beginning in fiscal year 1988, would it be better to reduce the M577A1 program and maintain an active base at a 1-8-5 rate until replacement occurs? This would result in having less of an M577A1 fuzes in inventory, but it would also allow for increased procurement of the XM762, and a greater inventory of this newer fuze in future years.

ANSWER:

5. Army's plan to buy MTSQ M577A1 fuzes beyond a 1-8-5 through FY 88 is necessary to maintain a balance of fuzes required to be on hand to support the new modernized conventional munitions that are scheduled to be in the US inventory at the end of each funded delivery period. Any plan to reduce these fuze buys would jeopardize Army's readiness. Artillery projectiles on hand in the inventory are rendered useless without the fuze to function the round.

6. One producer is currently producing the new lower cost configuration. Yet, production has been allocated between the two producers on an almost equal basis. Why hasn't a greater allocation been made to the firm currently producing the lower cost model?

ANSWER:

1. The FY 84 requirement was allocated on an equal basis due to various circumstances. The circumstances involved were as follows:

   (a) The FY 84 requirement was the initial delivery of the lower cost fuze (M577A1). The contractor (Hamilton Technology) was experiencing problems in producing this item. (They ultimately failed the initial first article.) It was anticipated, based on past experience, that delays in delivery would be likely. (This was the actual case. Initial deliveries were delinquent 2-3 mos.)

   (b) An in-depth capacity review was performed on both contractors. The result of the reviews was that 60% be awarded to Bulova Systems

(M577 Fuze) and 40% be awarded to Hamilton Tech (M577A1 Fuze). In order to derive the maximum benefits from the lower cost fuze, while at the same time insuring that the needed quantities would be delivered, a 50%-50% split was awarded.

2. The FY 85 requirement was structured so that each firm was bidding on the lower cost fuze (M577A1). The lowest bidder was to receive the largest quantity. Hamilton received 60% of the award at $50.90, and Bulova received 40% of the award at $56.00. Per a new capacity review performed on both contractors, the 69,000 per month awarded to Hamilton was the maximum that they could realistically be expected to produce.

7. The M582A1 is produced by the same contractors as the M577A1 Fuze. In fact, the M582A1 consists of an M577A1 loaded with a booster cup and pellet. The unit cost has been reduced as a result of fuze design changes, but due to the added costs of attaching the booster cup and pellet the M582A1 should be approximately $3.00 more than the M577A1 fuze. However, fiscal year 1986 budget backup information shows that there was relatively no cost difference between the M577 and the M577A1 for the fiscal year 1984 program. Additionally, the fiscal year 1984 M582A1 unit cost is shown approximately $9.00 less than the M577A1.

a. Why isn't the lower cost of the M577A1 reflected in the fiscal year 1984 budget support data as is shown for the M582A1 Fuze?

ANSWER: The M577A1 had $16.62 per unit added to procure M107 projectile metal parts for lot acceptance testing.

b. Why was a cost of $7.488 million included in the fiscal year 1984 M577A1 program for procurement of metal parts for the M107 155mm projectile? According to information provided by the Army, the M107 does not use the M577A1 fuze.

ANSWER:

1. M577A1 Item Specification, MIL-F-50983B with Amendment 7 dated 6 June 1983, requires this item to be tested on the following artillery rounds for various acceptance test phases:

   a. 105mm, M1 Cartridge

   b. 155mm, M107 Projectile with the M3A1, M119A1 or M119A2 Prop Charge or

   c. 155mm, M483 Projectile with M119A1 or M119A2 Prop Charge

   d. 8 Inch, M106 Projectile with the M1 Prop Charge

2. The reason 7.488 million was included in the Fuze Program for procurement of 155mm M107 Projectiles is that this is the least expensive 155mm Projectile in our inventory (approximately $100 each vs M483 which is approximately $600 each).

Budget Line No. 93
Fuze, Mechanical Time Superquick M582/582A1
(E61503)

1. The Army has an inventory of approximately one million M564 Fuzes. Because most of the M564 Fuzes are not approved for overhead fire, the M582 Fuze will be used for training.

a. Can the M564 fuzes be reworked so they could be used for overhead fire?

ANSWER: The M564 Fuze lots that are in the restricted status of not being suitable for overhead fire, received this status, as a result of reported downrange early bursts. Malfunction investigations, in the majority of incidents was attributed to human error (incorrect setting of the fuze). The Fuze MTSQ M564 is set by means of a rotatable cap that has an engraved time scale graduated from 0 to 100 seconds. This cap interfaces with the fuze body, which is engraved with a vernier scale and zero set line. The confusion occurs when the user sets the fuze and uses the vernier lines incorrectly in relation to the caps graduated time scale. This scenerio will cause the fuze to function at a time other than what the fuze setter intended.

There would be no reason to rework the fuze lots that the assignable cause for downrange early bursts was human error. CG, AMCCOM, has agreed to modify the restriction to permit firing over roads and other sparsely used areas, but not over troop formations. TRADOC and FORSCOM have been requested to accept this revised restriction.

b. What would be the approximate unit cost of such rework?

ANSWER: Not applicable because of answer given in 1a.

c. Could the fuzes be used effectively during a war without rework?

ANSWER: Yes.

GROUND EMPLACED MINE SCATTERING SYSTEM (GEMSS) AP M74 and AT M75 (E40601) and E40602)

1. Most of the prior year programs as far back as 1980 have not been delivered. Why not?

ANSWER:

A. The GEMSS system was TC'd in April 1980. The plan was to sole source key M75 compoents to Honeywell and key M74 components plus both Safe and Arming Devices (S&A) to Aerojet. The sole source contract to Aerojet was not placed due to high unit costs. A revised plan competed the combined FY80 and FY81 M74 buys plus both years S&A's. Aerojet won the competition for the M74 and Quantic Ind., an SBA company, won the S&A contracts. This occurred in Aug 1981.

Quantic experienced various startup problems and delivered their first S&A's in Sept 1983. They delivered 2 lots of M75 S&A, permitting the intitial assembly and 1st article of complete M75 mines in Dec 1983. They again encountered production problems which shut down M75 assembly at Iowa AAP for 10 months. M75 assembly was restarted in Nov 1984 and ran to Feb 1985 until the most recent S&A problem was encountered. (See Ans. 3.)

In summary, a combination of late TC, administrative leadtime delays, and production problems contributed to the current situtation.

Budget Line Nos. 95 and 96

Ground Emplaced Mine Scattering System (GEMSS) AP M74 and AT M75 (E40601) and E40602)

2. Comments to the production schedule state that the fiscal year 1982 and 1983 schedules are stretched out to allow continuity of production at

the load, assemble and pack plant due to cancellation of the fiscal year 1984 buy. If schedules were required to be stretched out to maintain continuity of production, then why is production of the fiscal year 1983 program scheduled at a rate greater than 1-8-5 and extended 2 months into the fiscal year 1985 funded delivery period?

ANSWER:

The above comment which appeared on the FY85 budget submit is no longer true and was inadvertently left on the FY86 submit for the M74 mine. That comment does not appear on the M75 P-21 remarks. The FY83 LAP deliveries must now be compressed and accelerated to achieve a 2-8-5 shift rate for the FY85 enhanced program.

3. The M75 has recently experienced problems with defective safety and arming devices. Currently, investigations are being conducted.

a. What is the status of the safety and arming device problem?

b. Has production of the M75 program resumed?

c. What are the prospects of completing all prior years' programs (i.e. fiscal years 1980-1985) by April 1987, a date that is already 2 months beyond the fiscal year 1985 funded delivery period, even when a 17-month procurement leadtime is used?

ANSWER:

a. Production at Iowa AAP was halted on 15 Feb 1985 due to an unacceptable 6% dud rate observed in testing at Iowa AAP. Red and Blue teams determined the root cause to be associated with the S&A device. Alternative corrective measures are being investigated.

b. M75 production has not resumed. It is estimated that full M75 production will resume not later than May 1985.

c. The Army is confident that through 2-8-5 shift operations the prior year programs can be completed by April 87.

3.c. The following schedule will meet the April 1987 objective:

	Undelivered					FY85							
FY/	Qty	O	N	D	J	F	M	A	M	J	J	A	S
80/	3K								2.4	.6			
81/	19K									3	7	9	
82/	43K												9
83/	40K												
85/	168K												
						FY86							
82/	43K	9	9	9	7								
83/	40K				2	11	13	14					
85/	168K								14	14	14	14	14
						FY87							
85/	168K	14	14	14	14	14	14	14					

4. Production of all M74 prior years' programs has yet to begin. Further delays are expected due to the earlier fielding requirements of the M75. Production of the fiscal year 1980-1984 program is now not expected to begin until July 1985, or more than 3 years beyond the end of the fiscal year 1980 funded delivery period using a 20 month initial procurement lead time.

a. If, as the Army has stated, production of both models may occur concurrently, then why do earlier fielding requirements of the M75 preclude M74 production?

b. Given that production of the M75 has been temporarily discontinued due to problems with safety and arming devices, why hasn't production of the M74 been started up in its place until the problems are corrected and M75 production resumes?

c. What are the prospects of completing all prior years programs (i.e. fiscal years 1980-1985) by April 1987, which is two months beyond the fiscal year 1985 funded delivery period end of February 1987 using a 17-month procurement reorder lead time?

ANSWER:

4.a. Earlier fielding of the M75 is a fallback position necessitated by the unavailability of M74 mines. Lack of sufficient quantities of M74 mine components preclude LAP production, not the M75 fielding.

4.b. If sufficient quantities of M74 components were available at Iowa AAP to permit continuous LAP, M74 production would be initiated. M74 production is independent of the M75 deliveries.

4.c. The Army is confident that all prior year programs will be executed as currently programed.

5. Given the delays in production of prior year programs and the increased quantities of the fiscal year 1985 and 1986 programs, production of both the M74 and M75 would have to be increased to a 2-8-5 rate in order to produce the fiscal year 1986 program within the funded delivery period. The production history for both models is minimal, and problems have already occurred further delaying production.

a. Is it realistic to expect completion of the fiscal year 1986 and all prior year programs by the end of the fiscal year 1986 funded delivery period, given the minimal production achieved to date?

b. When will production on a 2-8-5 basis begin?

c. Isn't it overly optimistic to expect production capacity to be able to reach and sustain a 2-8-5 level so soon after initial production has begun?

d. How many additional personnel will be required to operated on multi-shift basis?

e. Will the additional personnel have to be laid off after production drops to a 1-8-5 rate in future years?

ANSWER:

5.a. Completion of the FY 1986 buy within the funded delivery period will be difficult but achieveable. The number—and duration of new problems is expected to decrease significantly. By both COCO and GOCO standards, the forecasted 2-8-5 shift rates are low compared to similar items i.e. RAAMS and GATOR mines.

5.b. 2-8-5 production at Iowa AAP on the M75 will begin in Feb 1986 and in Oct 1985 for the M74 mine. The earlier 2-8-5 date for the M74 is needed due to a later program start i. e. July 85 (M74) vs May 85 (M75).

5.c. Production planners at Iowa AAP estimate, a 2-8-5 shift rate for GEMSS mines can be achieved in 4 to 5 weeks after the 1-8-5 rate is achieved. Iowa AAP has extensive experience on loading the similar RAAMS AT mine and the GATOR AT mine.

5.d. Iowa AAP estimates an additional 17 people will be required for the 2-8-5 operation. Iowa does not forsee any problem in hiring and training the additional personnel.

5. Given the delays in production of prior year programs and the increased quantities of the fiscal year 1985 and 1986 programs, production of both the M74 and M75 would have to be increased to a 2-8-5 rate in order to produce the fiscal year 1986 program within the funded delivery period. The production history for both models is minimal, and problems have already occurred further delaying production.

   e. Will the additional personnel have to be laid off after production drops to a 1-8-5 rate in future years?

ANSWER:

5.e. 17 people represent a small part of the total workforce. Fluctuations in the GEMSS workforce can be absorbed through normal attrition.

Budget Line Nos. 97, 98, 99 and 100
Volcano Ground/Air
Mines and Canisters
(E72194, E72195, E47200, E47600)

1. The Volcano mines and canisters being requested in fiscal year 1986 are to be used in the XM139 dispenser for fielding. The dispenser consists of a launch rack, control unit and hardware for connecting the system to a carrier vehicle.

   a. What additonal funding is being requested in fiscal year 1986 for the XM139 and would the XM139 canisters and mines provide all that is necessary to field the Volcano?

   b. What is the total quantity of XM139 dispensers the Army plans to procure and what is the extimated cost?

   c. What is the total life cycle cost of the Volcano in terms of development, procurement and operation and support?

ANSWER:

1.a. The XM139 Army approved program for FY86 is 18 units for $2.5m; no additional funds were requested.

The following are required for fielding the Volcano System:

1) XM139 Dispenser including mounting hardware, racks, and dispenser control unit

2) XM87 Canister which is loaded with 5 AT and 1 AP mines

3) XM86 Canister which is loaded with 6 dummy (inert) mines

4) Logistic support including initial spare parts, manuals, etc.

1.b. The current AAO for the Volcano XM139 Dispenser is 712 ea. Through the current FY86-FY91 POM period the Army plans to procure 394 ea for a total of $21.1m. The balance of 318 ea are estimated to cost a total of $14.3m.

1.c. The total life cycle cost estimate for the Volcano is $1,562.9m in current inflated dollars. This total is composed of $53.4m for development, $1,290.6m for procurement, consisting of XM139 Dispensers, XM87 Canisters with mines and XM88 Canisters, and $216.9m for operations

2. The Volcano's procurement of the mines and canisters in fiscal year 1986 appears very premature since engineering development is not scheduled to begin until October 1986, testing completion dates are March and June 1989 and type classification is scheduled for the end of fiscal year 1988 and 1989. However, type classification limited procurement is scheduled for late fiscal year 1985 and 1986.

a. Provide overall justification for requesting funds for the Volcano in fiscal year 1985 since this appears very premature relative to its development, testing and type classification.

b. What testing data is available to evaluate its performance and what will be available to support its type classification limited procurement?

ANSWER:

2.a. The full scale Volcano Program with engineering development scheduled in Oct 86, test completion in Jun 89, and type classification for Various vehicles scheduled for 4QFY88 and 4QFY89 was initiated to satisfy the system ROC. Concurrently, however, an accelerated program was established to meet an urgent need to provide the 7th and 9th Infantry Divisions with a modern mine laying system. This need will be met by type classifying on a limited procurement (TCLP) basis mines used on the GATOR system and an advanced development dispenser.

2.b. Limited testing has been completed to date. Final engineering tests have been completed by the system contractor -Honeywell. DT 1 began in Jan 85. To date the vehicle stability test has been successfully completed. The remainder of DT 1 is scheduled to be completed by June 85. Operational test will be conducted in May, June 85.

3. Air Force GATOR mines are used in the Volcano system. These mines are experiencing delays in production due to defective and rejected materials.

a. What impact will these GATOR production delays have on the Volcano development schedule?

b. Provide specifics on problems being encountered in producing GATOR mines and the planned fixes to those problems.

ANSWER:

3.a. Current planning is to sequence Volcano tests so that delayed GATOR mines would be tested last. Further delays would directly impact Volcano scheduling.

3.b. Specific GATOR S&A and Body Assembly problems and fixes are listed below:

1) Maintaining a short across the S&A Detonators after Transportation Vibration Test was a problem during First Article Acceptance Test (FAAT) and initial S&A Lot Acceptance Test (LAT's). Improvement in contractor's shorting process has substantially reduced this problem and the shorting design is being reviewed and will be improved as necessary to prevent the shorting problem from recurring. Not considered to be a continuing and production problem.

2) Difficulty existed in meeting specification FAAT and LAT requirements that all S&A Main Lead Must Function. User requirements do not substantiate the need for such tight specification requirements and the specification has accordingly been revised. Revised specification requirements are now being met.

3) There has been a problem in meeting S&A Detonator Circuit Specification requirements. Resistances have been higher than specification allows. Although there has been no evidence that high resistance adversely affects the functioning characteristics, action has been initiated to correct this problem by redesigning the ground clip after the RAAM design, which further improves contact reliability.

4) Non-conforming material, procurred by the contractor, on both the S&A's and Body Assemblies has also contributed to delivery delays. Receipt of Non-conforming material was caused by contractor's insufficient monitoring of his vendors and late identification of resultant problems.

3.b. 5) Body Assembly Electronics Artwork was not capable of producing a Flexible Printed Wiring to TDP requirements. The Artwork has been revised to eliminate the problem.

6) Difficulty has existed in meeting the Scatterable Mines Timer Low Voltage detection limit at extreme temperatures. For current production, screening techniques yield the required hardware. A PIP Scope of Work has been initiated to update the time to State of the Art Technology which will eliminate the problem.

7) Initial Contractor Body Assembly Test Equipment Design and Test procedures were not adequate and resulted in FAAT and LAT problems which required test redesign, retesting, and resulted in schedule delays.

4. The Army is requesting funding for two other mines systems in fiscal year 1986 (Ground Emplacement Mine Scattering System (GEMSS) and Modular Pack Mine Systems (MOPMS)). Each system has a unique application, however, the Volcano may ultimately fill the role for all these systems.

a. Is procurement of the GEMSS on schedule?

b. What is the development and testing status of the MOPMS and when will it be approved for production?

c. What is the Army's current position on the use of Volcano as the single ground system?

d. Would significant operating and support cost savings be achievable if only the Volcno system is fielded since only one logistics systems would be required?

e. If funding is provided in fiscal year 1986 for the Volcano would this reduce the need for GEMSS and MOPMS funding?

ANSWER:

4.a. The GEMSS M128 Dispenser procurements are on schedule. The FY82 build will be completed by 1 May 85 per the contract schedule. The FY83 and FY84 builds are also proceeding per contract schedule.

There are difficulties being encountered on delivery of the GEMSS M74 AP and M75 AT mines. A description of these problems and the planned solutions may be found in responses to questions under Budget Line Nos. 95 and 96.

4.b. MOPMS DT II testing is complete in the Arctic, tropics and desert. The temperate phase is ongoing at APG. OT II is complete. Type calssification and release for production are expected by the end of 4QFY85.

4.c. The Volcano cannot replace the Modular Pack Mine System (MOPMS). The MOPMS preforms specific functions on the battle field which complement both GEMSS and Volcano. The MOPMS provides unit commanders a capability to emplace small unit protective minefields and relaces the older logistically and manpower intensive conventional mines. MOPMS also is employed to close cleared lanes through GEMSS and Volcano minefields which are intentionally located to permit withdrawal or covering forces. The Army considers Volcano as a direct replacement system for the GEMSS as well as the M56 helicopter delivered mine system. A decision will be made as to the continuation of GEMSS procurement beyond FY85 based on the results of Volcano testing during 1985. Assuming successful Volcano testing, GEMSS procurements in FY87 and beyond (No procurement is programed in FY86) may be cancelled. The 130 GEMSS system procured up to that point, will be fielded to forward deployed units only and will serve as the urgently needed interim capability until the production Volcano can be fielded.

4.d. Operating and support cost savings will be achieved by the fielding of Volcano to replace GEMSS and the M56 system. The Volcano program cannot be further shortened to eliminate the need for continuation of GEMSS fielding. The urgent need for a rapid ground mining capability cannot await the expected full fielding of Volcano in 1992.

4.e. The Currently programed FY86 funding will procure Volcano systems under a limited procurement type classification to provide the urgently required capability for non-GEMSS equiped organizations (eq LID, MTZ Div). Later procurements of Volcano will replace or complement GEMSS.

Facility for 105mm, XM900
PROJECT 5860127

1. The Army plans to contract for XM900 production facilities with only current producers of the M833 cartridge.

   a. What alternatives were considered, e.g., award the contract to one producer for 28,000 rounds to maximize competition and broaden the production rate?

ANSWER:

Regarding the penetrator facilities, there are only two licensed commercial depleted uranium facilities in the country. It is planned to implement this item at both of those facilities. To date, penetrator competition has been active between these two producers and it is anticipated that this would continue on the XM900. Regarding the other components, namely metal parts and load, assembly and pack, utilization of the present base is the most cost effective implementation route since this is largely a retooling effort for these production lines. PM-TMAS has studied the impact of closing one set of producers; the associated cost increased on R&D, production, layaway, maintenance and start-up make this an uneconomical consideration.

b. Will the producers discontinue all M833 production prior to producing XM900 cartridges and when is this to take place?

ANSWER:

M833 production will be decreased to the point of termination over a 2 to 3 month period while XM900 production will begin and increase during this same period: The planned timeframe for this transition is 2d and 3d Qtr FY 87.

c. What cost and time would be required to convert back to M833 production and what is the potential that this will be required?

ANSWER:

All equipment purchased under this effort will have M833 capability; a change of tooling will be needed to produce M833 items. Also, all M833 facilities converted to XM900 capability under this program can be retooled to manufacture M833 cartridges. The estimated time for this conversion is 1 to 2 weeks. The estimated cost is $.75 million. This occurrence is doubtful since only following type classification (TC) will transition to XM900 happen. Since it is a superior item to the M833 cartridge, regression to M833 is not expected.

d. Is the M833 production on schedule and without problems such that a smooth transition to XM900 production can be anticipated?

ANSWER:

M833 is currently behind schedule due to problem with sabot break-up in projectiles. Engineering Change Proposal (ECP) incorporating fix was approved Jan 85 and production is scheduled to resume May 85. It is anticipated that the FY 85 and FY 86 programs will be completed within the funded delivery period.

Assuming no further problems surface with the M833 and the XM900 matures as planned, a smooth transition to XM900 production can be anticipated.

2. The penetrator producers are to ultimately have a dual 105mm, XM900 and 120mm, M829 capability through conversion of existing M833 equipment.

a. What is the planned capability to produce XM900 and M829 penetrators concurrently?

ANSWER:

As a result of Project 5830025, a capability to produce 8,000/month M829 penetrators on a 3-8-5 basis, i.e., all out production basis, will exist. Following completion of this XM900 program, there will be a combined XM900 capability of 28,000/month on an all out production basis. This means that 8,000/month M829 penetrators and 28,000/month XM900 penetrators can be manufactured concurrently.

b. Provide defense guidance/criteria used to size this project's dual production capability.

ANSWER:

The guidance used to establish XM900 capability is as follows: Use FYDP monthly requirements to establish capability to meet the requirement on a 1-8-5 production basis. The FYDP requirements for XM900 ranged over the last year from 10K/month to 12K/month. Using this requirement range on a 1-8-5 basis, we are establishing an all out capability, i.e., a 3-8-5/500

hour production month of 2.5 times the 1-8-5 level or 28K/month. This establishes a balanced component capability for the entire cartridge at the 28K/month level. It should be noted that this project is not establishing dual production capability.

FACILITY FOR 105mm, XM900: PROJECT 5860127

3. QUESTION: The Army's 105mm Enhancement program includes development of the XM900 cartridge and XM24 gun tube. Both are scheduled for type classification in Dec 86. Further, the XM900's fielding could be accelerated by about 1 year if fiscal year 1986 prove-out funds are provided.

a. Is fielding the XM900 cartridge prior to fielding the new XM24 gun tube beneficial in terms of defeating the current or future threat?

ANSWER: The incorporation of the XM24 is consistent with the fielding plan for the improved tank system. The XM900 does provide an improvement in penetration capability over the M833.

QUESTION:

b. Can the XM24's fielding be accelerated and how much would it cost?

ANSWER: In light of non-availability of the tank and long lead components, fielding cannot be accelerated.

c. What action has been taken to obtain the prove-out funds for the XM900 and what is the estimated cost?

ANSWER:

PM-TMAS is developing a plan for prove-out of the XM900. This plan entails initial production line prove-out and early first article delivery. This would achieve early Initial Operational Capability (IOC) and provide for debug of production processes. This plan will be achieved through an Army reprograming action in the amount of $5.5M. Upon completion of the facilitization effort, a final facility capability demonstration will occur utilizing XM900 production quantities.

Budget Line Number 131
Provision of Industrial Facilities

Modify, Convert, and Reactivate
RDX and HMX Production Lines
Project 5862447

1. Projects in fiscal years 1984, 1985, and 1986 were planned to accomplish the effort combined under the fiscal year 1986 project.

a. Why has the Army decided to request funding for a single project that was previously a multiple project effort?

ANSWER: Projects for FY84, 85 and 86 were originally developed to support forecasted FY85-89 FYDP requirements. Even though funding for the projects has been delayed, the FYDP requirements, against which this project was predicated, continue to exist. This situation has necessitated consolidation of the multiple projects into a single project to meet FY85-FY89 FYDP production requirements. An example and an area of specific concern, is production of HMX to support the Navy's Trident II program. In this example, Holston Army Ammunition Plant currently has a total production active capability of 348,000 pounds of HMX per month. The Navy's requirements increase to 493,000 pounds of HMX per month in FY88. To meet this requirement subprojects 8 and 10 are required. Equipment procurement leadtimes, installation and proveout will require 20 months. With a revision to the current HMX production process, the Navy will require delivery of the "new" HMX by Jan 87 to allow requalification testing prior to the actual production rounds in FY88.

b. What actions have been taken to increase the likelihood that the fiscal year 1986 project will be funded since funding for two earlier projects to accomplish these tasks was denied?

ANSWER: Design on this project will be completed by 1 Oct 85, with one exception. The confidence level of current cost estimates is high due to the increased status of design. The project has been stratified to show actual application of each subproject against its final application; RDX to HMX conversion; FYDP; stockpile. It must also be noted that funding denied this fiscal year will jeopardize the Army's ability to support FYDP production requirements, especially those for HMX in support of the Navy's Trident II Program.

2. The fiscal year 1986 project includes 13 subprojects addressing seventy tasks and is to accomplish all reactivation and modernization at Holston which is not currently being addressed by other projects.

a. Provide all other efforts that are ongoing to modernize and reactivate Holston Army Ammunition Plant.

ANSWER:

Ongoing modernization projects for Holston AAP include:

Project 5833906, Replace Waste Heat Boiler for 300 ton per day Nitric Acid Plant.

Project 5843906, Modify Four 50 ton per day Nitric Acid Plant Units.

Project 5852199, Modernize Coal Handling Facilities (design activity only, construction funds not released).

Project 5852439B, Expand Lacquer Preparation Facility (design activity only, construction funds not released).

Project 5852054, Modernize Composition C-4 Facility, Line 8 (design activity only, construction funds not released).

Project 5862439C, Productivity Improvements (in design).

b. Will Holston be fully modernized after the fiscal year 1986 project and other ongoing projects are completed?

ANSWER:

No. Other key modernization projects require funding in fiscal years 1987 through 1990. In addition, there are several less critical outyear projects that are planned with project concepts not yet finalized.

c. Will Holston's production capability be maximized after the fiscal year 1986 project is completed?

ANSWER: No. The following projects will be required to maximize Holston production capability for FYDP production requirements after the fiscal FY86 project is completed.

a. Project 5873000A, ~~MOD-~~Modernization "A" Composition Facility Line 10. This project will provide for the maximization of capabilities for production of Composition A-5.

b. Project 5892999, Modernization of Facilities for PBX's. This project will provide for the maximization of capabilities for the production of increasing types and quantities of PBX's.

d. What percentage (dollars and tasks) of the effort planned under the fiscal year 1986 project could be justified under the Army's Plant Support and Equipment Replacement program.

ANSWER:

Of the $31.1M project cost and seventy tasks, $24.6M and sixty-four tasks respectively could be justified under the Army's Production Support and Equipment Replacement Program (PSR). Since PSR programs usually range from $2M to $8M and because of the magnitude of this effort, support to stockpile as well as FYDP, and conversion of certain RDX facilities to HMX facilities, this project was submitted as a MOD effort. If the effort in this project is diverted to the PSR program, then an equivalent increase in the Holston AAP PSR funding would be required. Otherwise, PSR support to the entire remainder of the Ammunition Production Base would be eliminated with serious impact to planned production.

3. Concurrently with requesting funds for the fiscal year 1986 project, the Army plans to request late start fiscal year 1985 funding to begin one subproject earlier.

a. What is the Army's objective in requesting funding for the same subproject under the late start fiscal year 1985 program and 1986 fiscal year program?

ANSWER:

Since the FY85 project was deleted by Congress the Army does not contemplate a late start.

b. What impact will the fiscal year 1985 late project have on the subproject's completion date and if the late start project is funded, how will the Army use the funding provided under the fiscal year 1986 program?

ANSWER:

Since the FY85 project was deleted by Congress the Army does not contemplate a late start.

4. Funding for earlier projects was denied because final designs had not been completed as required by 1976 Congressional guidance. This project's final design is not scheduled for completion until June 1985.

a. Why is the Army requesting funding for a project that does not meet Congressional guidance and was not approved for this reason in previous years?

ANSWER:

Even though the project does not meet Congressional guidance, funds are urgently needed so that Holston AAP can meet FYDP and stockpile requirements. The effort can be contracted in FY 86.

b. What percentage of the final designs are completed in terms of subprojects and tasks?

ANSWER:

Percentage of design completion for each subproject is shown below. Subprojects are listed in order of priority.

Priority	Subproject	% Design Complete	Remarks
1	10	100	Convert bldg D-5 to an HMX facility. Required to support the Navy in the Trident II Program (see answer to 3a).
2	1 thru 7	45	Percent design completion represents weight average by cost.
3	12	5	See answer to 4c.
4	8	29	See answer to 4c.

Following subprojects are unranked:

—	11	0	Support FY 87 requirements.
—	9	0	Supports subproject 10

Subproject status was derived from analysis of design completion of appropriate individual task and element subdivision status.

c. Has the Army considered requesting funds only for those subprojects/tasks where designs are complete and what would this reduced project cost and what would it accomplish in terms of Holston's production capability?

ANSWER:

A restructuring of the project to match design completion is not recommended since there are numerous subprojects and tasks which effect the operation of the plant overall and which impact a multiplicity of products to be produced. However, if this project were to be portioned, then the following clusters of work packages on a priority basis are presented:

a. Subproject No 10, building D-5 Modernization - This is essential to support of the Trident II Program.

b. Subproject No 1 through 7 - This comprises what was the stand-alone FY 84 phase of Project 58X2447. This work is required to alleviate shortfalls in the following explosives during FYDP: Comp A-5, Comp C-4, PBX0280, PBX W109(E) precoat and compositions containing HMX. End items affected include ICM rounds, MICLIC, Navy bombs, Air Force submunitions, and press loaded armor defeating ammunition.

c. Subproject No 12 - This effort provides utilities upgrading and deficiency correction in support of the FYDP on a plant wide basis.

d. Subproject No 8 - This effort reactivates additional facilities for FYDP and stockpile purposes.

The total of these subprojects is $23.6 million. This project is considered low risk since design is based on past experience and known technology.

SUBCOMMITTEE RECESS

[Whereupon, at 10:55 a.m., Wednesday, May 15, the subcommittee was recessed to reconvene at the call of the Chair.]

DEPARTMENT OF DEFENSE APPROPRIATIONS FOR FISCAL YEAR 1986

THURSDAY, MAY 16, 1985

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 10 a.m., in room SD-192, Dirksen Senate Office Building, Hon. Ted Stevens (chairman) presiding.

Present: Senators Stevens, Andrews, Kasten, D'Amato, Rudman, Proxmire, Hollings, and Sasser.

DEPARTMENT OF DEFENSE

DEPARTMENT OF THE ARMY

STATEMENT OF GENERAL BERNARD W. ROGERS, U.S. ARMY, COMMANDER-IN-CHIEF, U.S. EUROPEAN COMMAND

NATO COMMITMENT

DEFENSE SPENDING BY NATO ALLIES

Senator STEVENS. The subcommittee will come to order.

The subject of today's hearing is our NATO commitment. This is the first hearing we have devoted to NATO since 1982. The growth of our commitment has become increasingly important in light of the severe reductions this committee must make to the defense budget request for fiscal year 1986.

In nearly every category for comparison, it is clear the United States already devotes more of its national resources to defense than our allies. Examining defense spending as one indicator, it can be argued the United States spends more to defend Europe then do our European allies.

Yet, none of our allies has the other global responsibilities which the United States must also meet. Redressing this imbalance in this period of fiscal constraint is one of the critical defense issues of the day.

Because of the spending limits and the current inequities in burden sharing, the United States must gain more defense support from our allies. If we are to be fair and equal partners, the cost of the common defense has to be distributed equitably. Failure of our allies to provide more for their own defense could jeopardize continued strong U.S. support for the NATO alliance.

With these thoughts as preface, let me welcome Gen. Bernard W. Rogers, the Commander-in-Chief of the U.S. European Command.

General, the committee is most eager to hear your thoughts on the strength of the NATO alliance, what restraints on U.S. NATO spending you might favor to meet budgetary reductions that have been imposed on us, I might say against the wishes of all the members of this committee, and what actions might be taken to encourage our allies to share more equally the cost of defense.

I might say, General, that some of us will be in Brussels for Memorial Day and look forward to being able to meet with your staff and you if you are there. We look forward to a briefing there, if it is possible.

We will put your complete statement in the record. I know that you will want to summarize your remarks, but you may do it any way you wish.

I will ask my good friend, Senator Stennis, if he has any opening remarks.

Senator STENNIS. I welcome General Rogers.

We are about to run out of money, General, and other parts of the world need help. I am interested in knowing what you have to say about it.

Senator STEVENS. Gentleman, are there any other comments?

[No response.]

Senator STEVENS. Again, General, we are happy to see you here.

ALLIED COMMAND EUROPE KEY SECURITY ISSUES

General ROGERS. Thank you, Mr. Chairman.

I can do it either way. I can just let the statement stand that is in the record or I can give a brief summary of the highlights of that, as you wish, Mr. Chairman. I would hope to do that within 10 minutes.

Senator STEVENS. You present your statement however you wish to do so.

General ROGERS. First, let me say that it is a pleasure to appear before this committee again.

Since the U.S. contribution to Allied Command, Europe, is represented by European Command and U.S. forces in Europe, I first would like to touch on the key security issues currently facing Allied Command Europe. These issues help provide a focus for the individual defense efforts of each of the Alliance nations and for the collective allied attention to common security goals and objectives.

MISSION OF ALLIED COMMAND EUROPE

The mission of Allied Command Europe is to make its contribution to the deterrence of war. The essential elements of deterrence are:

One, an appropriate strategy.

Two, sufficient military capability to implement that strategy.

And three, evidence of the required political unity, resolve and will to execute the strategy.

NATO STRATEGY

NATO strategy is a strategy of flexible response supported by a triad of forces. This strategy is as appropriate today as it was when adopted in 1967 in lieu of the massive retaliation strategy we had up to that time. It was reaffirmed as appropriate by the NATO foreign and Defense Ministers last December.

With respect to the second element, sufficient military capability, there must be adequate forces for each leg of the triad. NATO's military weakness is the conventional leg of the triad.

The United States and the United Kingdom are taking the appropriate steps to restore the deterrent value of our strategic nuclear forces, and the continued deployment of the intermediate range nuclear forces on the soil of Western Europe will restore the deterrent value of those forces.

However, if Allied Command Europe were attacked conventionally today, NATO political authorities would face very quickly the decision to authorize the release of theater nuclear weapons. This results primarily from a lack of sustainability.

INCREASED STRENGTH OF ALLIED COMMAND EUROPE

Allied Command Europe, gets stronger every year, but the continually widening gap between NATO and the Warsaw Pact conventional capability impacts on the credibility of NATO's deterrent because it compels the alliance to rely excessively on the early first-use of nuclear weapons.

In doing so, it does not provide a credible basis for deterring what I determine to be the most likely threat facing the Alliance, which is Soviet intimidation and coercion of Western Europe resulting from a threat of massive conventional military superiority.

The military situation for NATO, though difficult, is not hopeless beyond restoration. As a defensive alliance, NATO need not match its potential aggressor one for one in any category of force comparison.

CONVENTIONAL CAPABILITY IMPROVEMENTS

The conventional capability improvements required by the NATO strategy of Flexible Response are limited to those which would be perceived by the Warsaw Pact as offering NATO a reasonable prospect of frustrating a nuclear attack by conventional means, or at least without the early resort to nuclear weapons.

Mr. Chairman, as SACEUR, I am encouraged by several difficult decisions made and actions taken over the past year to improve Allied Command Europe's posture. The common funded infrastructure program has been tripled in size over the previous slice group. It will provide me a means as SACEUR to program the urgently needed facilities at reinforcement airfields, the co-located bases.

FOLLOW-ON FORCE ATTACK

A further commitment to raise the level of ammunition stocks was forthcoming from the Defense Ministers last December. To me one of the most important actions taken by the alliance last year was the acceptance by the nations of the long-term planning guideline for follow-on force attack.

The SACEUR nuclear weapons requirements study of 1985, culminating 5 years of effort, will point the way into the 21st century for non-strategic nuclear resources by Allied Command Europe.

A newly developed conceptual military framework will assist in setting the long-range direction for conventional forces and, when implemented, will have a favorable impact on the length of time that Allied Command Europe will be able to defend conventionally.

In support of the third element of deterrence, evidence of unity and resolve to execute the strategy, the Alliance continues to deploy intermediate range nuclear forces on European soil, Belgium being the latest to take the step in March.

IMPROVEMENT OF CONVENTIONAL DEFENSE

The December 1984 meetings of the Foreign and Defense Ministers renewed their commitment to improving conventional defenses and toward meeting NATO force goals for 1985-90.

A mandate was given to the Secretary General to develop conventional defense initiatives which he will report out next week to the Ministers of Defense. These all help display cohesion and resolve.

AIRBORNE EARLY WARNING SYSTEM

One of the alliance's success stories, the common-funded NATO airborne early warning system, continued its deployment and training on schedule, having come in under cost and on time. Most member nations did increase their 1984 defense expenditures in real terms.

Continued U.S. leadership within the Alliance is essential, Mr. Chairman. Its leadership has been strengthened over the past several years by demonstrating that substantial force improvements are possible even under conditions of economic restraint.

By challenging the Alliance to match its deeds as best it can and not threatening to punish it if it fails, the United States, I believe, can best get its allies to continue to work toward improving their conventional defenses.

U.S. FORCES IN EUROPE

I would like to turn to the status of U.S. forces in Europe. There are four priority tasks which have guided U.S. European Command over the past 5 years.

The first is to continue to take proper care of our troops and their families with all that entails. I would call the attention of the committee again to the "psychic compensation" so important to those serving in uniform, and operations and maintenance programs impact upon such psychic compensation.

The second task is doing better with the forces assigned to Allied Command Europe through USEUCOM to make sure they meet ACE standards.

The third task is to continue essential modernization and as we do, not only within European Command, but throughout the Alliance, seek the means to improve our ability to reduce to a manageable proportion the number of Warsaw Pact forces arriving at our defensive positions.

In short, improve our ability to attack with conventional weapons an aggressor's follow-on forces: operational maneuver groups, second and third echelon and reserves.

The fourth task is to add to our force structure. Some active force structure growth is necessary. We also need to do much better with the mobilizable reserves within the Alliance.

The support of Congress has assured improvement being made over the past years in these priority areas.

Let me conclude by some thoughts I wish to leave with you as you deliberate over the Defense budget.

First, NATO strategy for deterrence of war and defense of our vital interests in Western Europe remains sound.

Second, further improvements in conventional capability are essential and achievable throughout Allied Command Europe.

Third, European Command needs your support in some key defense programs.

Let me tick those programs off for you, Mr. Chairman.

KEY DEFENSE PROGRAMS

First, the people programs.

Second, the continued deployment of the ground-launched cruise missiles and the Pershing II's until there is an agreement reached at Geneva or the total of 572 have been deployed.

Third, the provision of meeting M-Day essential force requirements: POMCUS, storage facilities, support personnel requirements, forward stationing of combat service support units. The elimination of the European troops' strength ceiling. Provisions of mobility and reinforcement capabilities so that we can meet our commitments for 10 divisions, 88 tactical fighter squadrons and a marine amphibious brigade in Europe after 10 days of mobilization.

The continued funding for the wartime host nation support, especially that associated with the 93,000 that the Federal Republic of Germany has committed.

The fulfillment of sustainment requirements with special attention to what I call potential "war stoppers" in the sustainment ability of the United States in Europe.

A wartime capability for hospitalization and medical evacuation.

Support for systems needed for the effective conventional engagement of the follow-on forces with special attention to standardization and interoperability with allied assets.

A modern, binary chemical retaliatory capability.

Your assistance in funding what is necessary for combating terrorism and for special operations forces capabilities.

That, Mr. Chairman, is a summary of the statement that I have asked to be inserted in the record. Thank you.

[The statement of General Rogers follows:]

STATEMENT BY GENERAL BERNARD W. ROGERS
COMMANDER-IN-CHIEF U.S. EUROPEAN COMMAND
TO THE SENATE APPROPRIATIONS SUBCOMMITTEE ON DEFENSE
WASHINGTON, D.C., 16 MAY 1985

INTRODUCTION

Mr. Chairman and distinguished members of the committee. It is a pleasure to appear before this committee to discuss the status of US forces in Europe.

Since the US contribution to Allied Command Europe (ACE) is represented by the United States European Command (EUCOM), I would like first to touch on the key security issues currently facing ACE. These issues provide the focus for the individual defense efforts of each of the Alliance nations and for the collective Allied attention to common security goals and objectives.

NATO SECURITY ISSUES

NATO is completing its 36th year. It is the most successful peace movement in history. It is an alliance whose mission is deterrence. Although within the Alliance there continue to be some arguments about the form and size of nations' security efforts, there is a consensus on both sides of the Atlantic that the essential elements of deterrence are:

- an appropriate strategy,
- sufficient military capability to implement the strategy, and
- evidence of the required political unity and resolve to execute the strategy.

Appropriate Strategy

With regard to the first element, an appropriate strategy, NATO's is a deterrent strategy of Flexible Response supported by a triad of military forces: strategic nuclear, non-strategic nuclear and conventional. Inherent in its strategy is an agreed Allied commitment not to be the first to resort to military force; however, NATO retains the option to be the first to use nuclear weapons to defend itself if attacked. Combining a certainty of NATO response to aggression with the uncertainty of the precise nature and scope of that response strengthens deterrence by making it impossible for the Soviets to calculate with confidence the risks they would incur by initiating any form of aggression. It is this uncertainty, this incalculability which is the vital factor in NATO's equation of deterrence. This strategy of Flexible Response was reaffirmed as appropriate for the present and foreseeable future by the NATO Foreign and Defense Ministers in their December 1984 meetings.

Sufficient Military Capability

Regarding the second element, sufficient military capability, NATO must provide adequate forces for each leg of its triad to sustain the necessary deterrent balance of forces with those of the Warsaw Pact. The United States and the United Kingdom have embarked on programs to modernize their strategic nuclear forces; the deterrent value of those forces will remain high, provided the modernization programs are fully implemented. The NATO decision of December 1979 to modernize NATO's intermediate-range nuclear forces addressed major shortcomings in that important leg of our triad. It only remains for the Alliance to continue the implementation of that modernization -- which we started in December 1983 and are continuing on schedule despite Soviet attempts to prevent us -- and we will fill the gap in that portion of our spectrum of deterrence.

For some years we at SHAPE have been stating that NATO's major weakness is in the conventional leg of the triad. I have pointed out in the past that if ACE were attacked conventionally, NATO political authorities would face fairly quickly the decision to authorize the release of theater nuclear weapons. This situation results primarily from a lack of sustainability with trained manpower, ammunition and war reserve materiel. Although ACE gets stronger each year, the Warsaw Pact continues to outpace Allied efforts. The continually widening gap between NATO and Warsaw Pact conventional capabilities impacts the credibility of NATO's deterrence because it compels the Alliance to rely excessively on the early first-use of nuclear weapons. While the possibility of first-use of nuclear weapons retains significant deterrent value, the threat of early first-use does not compensate for pronounced conventional disadvantages. Such heavy reliance on early nuclear first-use does not provide a credible basis for deterring what I believe to be the most likely threat the Alliance faces: Soviet intimidation and coercion of West European nations resulting from the threat of massive conventional military superiority.

Maintaining the political and economic freedom of action of the West European nations is an American security interest as well as a European one. If the balance between NATO and Warsaw Pact capabilities reaches the point where the military situation -- even for a defensive alliance -- is beyond restoration, there is the very real danger that political and economic freedom of action in Western Europe could erode, as Western leaders make decisions in the shadow cast by Warsaw Pact military might.

The military situation for NATO, though a difficult one, is not hopeless; it is not beyond restoration. As a defensive Alliance, NATO does not need to match the Warsaw Pact one for one in any category of force comparison. The conventional capability improvements required by the NATO strategy of Flexible Response are limited to those which would be perceived by the Warsaw Pact as offering NATO a "reasonable prospect" of frustrating a non-nuclear attack by conventional means, or at least without the early resort to nuclear weapons. Such a conventional posture would:

- preserve the integrity of our conventional defenses long enough to permit a deliberate and determined decision by NATO political authorities to resort to nuclear weapons;
- protect our nuclear delivery means and related command and control systems until they are needed; and,
- face the Warsaw Pact with two options, if it attacked: to withdraw, or be the first to escalate to the use of nuclear weapons, which they do not wish to do for fear of further escalation to the strategic exchange, which the Soviets fear.

As SACEUR, I am encouraged by the several difficult decisions made and actions taken over the past year which will improve ACE's posture. For example, NATO's common-funded infrastructure program has been tripled in size to 3 billion Infrastructure Accounting Units (IAUs) from a level of 1 billion IAUs in the last slice group. This increase will provide urgently needed facilities at reinforcement airfields, including hardened aircraft shelters. A further commitment to raise the level of ammunition stocks was also forthcoming from Defense Ministers last December. In my mind, one of the most important actions taken by the Alliance was the nations' accepting last fall the Long Term Planning Guideline for follow-on force attack (FOFA). I believe that the resultant improvement of our ability to find and strike -- with conventional weapons -- the Operational Maneuver Groups, second and third echelons and reserves of the Warsaw Pact before they can reach our defensive positions may well determine the measure of success of our conventional defense. The SACEUR Nuclear Weapons Requirement Study '85, the culmination of 5 years of effort at SHAPE, will point the way into the 21st century for non-strategic nuclear resources needed by Allied Command Europe. The newly developed conceptual military framework will assist in setting the long-range direction for conventional forces. These decisions will have a favorable impact on the length of time that ACE will be able to defend conventionally.

Unity and Resolve

In support of the third element of deterrence, evidence of unity and resolve to execute the strategy, the Alliance continues to deploy the INF weapons on European soil, the Belgians being the latest to take this essential step. In the December 1984 meetings of Foreign and Defense Ministers, NATO nations renewed their commitment to improving conventional defenses and toward meeting the NATO Force Goals for 1985-90. The decisions and actions over the past year, which I mentioned earlier, displayed cohesion and resolve to implement the strategy. One of the Alliance's success stories, the common-funded NATO Airborne Early Warning System, continued its deployment and training on schedule. Further, despite severe funding constraints, most member nations did increase their 1984 defense expenditures in real terms.

U.S. Leadership

Continued US leadership within the Alliance is essential. Its leadership position has been strengthened by demonstrating to its Allies over the past several years that substantial force improvements are possible even under conditions of economic constraint. By challenging the Alliance to match its deeds as best it can and not threatening to punish it if it fails, the US can best get its Allies to continue to work towards improving their conventional defenses. With the support of the Congress, NATO can continue to make progress.

PRIORITY TASKS FOR US EUROPEAN COMMAND

Turning now to the status of the US forces in Europe, there are four priority tasks which have guided US European Command over the past five years. In the face of continuing Soviet military improvements and the widening imbalance of conventional capabilities, these tasks are more important than ever.

The first task is to continue to take proper care of our troops and their families. This means supporting them with adequate pay and material compensation; medical care; housing; family care; and appropriate working, living and recreational facilities. It also means providing them with a high level of "psychic compensation" which comes from rigorous, mission-oriented training; from ability to keep their equipment maintained properly; from being a part of a capably-led team; and from knowing that their leaders "give a damn" for them and their families. Much of this "psychic compensation" is related to adequate funding of operations and maintenance (O&M) programs.

The second task of US European Command is to do better with the forces assigned by ensuring they meet Allied Command Europe (ACE) standards for manning, equipping, training, maintaining, sustaining, and reinforcing. These forces, along with those of the Allies committed to ACE, will occupy our forward defensive positions and must hold against the lead attacking echelon of the Warsaw Pact.

USEUCOM's third task is to continue the essential modernization of our weapons systems and, as we do, seek means to improve our ability to reduce to manageable proportions the number of Warsaw Pact forces arriving at our defensive positions. In short, improve our ability to attack an aggressor's follow-on forces with conventional weapons.

Our fourth task is to add to our force structure, primarily with mobilizable, trained reserves. However, even with due regard to stringent budget considerations and other priority tasks, some active force structure growth is necessary to support modernization and requirements responding to the threat.

These tasks, if fulfilled, will add to the collective deterrent, improve the ability of US forces to defend forward at the General Defensive Position and give them a greater capability to strike Warsaw Pact follow-on forces. Support of the Congress has ensured improvements being made over the past years in these priority areas.

Despite substantial improvements of US forces in recent years, they are still not as capable today as they might be, nor can US forces committed to the early reinforcement of NATO meet their required timetables for deployment. These deficiencies hinder our ability to fulfill our mission in Europe. With the support of Congress, we can remedy these shortcomings and thereby strengthen deterrence.

With that thought in mind, I wish now to set forth some of my specific concerns for improvement of the operational capability of US forces in EUCOM. I remind you that operational capability consists of four factors: readiness, sustainability, modernization and force structure.

USEUCOM OPERATIONAL CAPABILITY

Today, the operational capability of US combat forces in Europe is at a higher level than at any time since I have been the USCINCEUR. You members of Congress are responsible for providing the means to achieve that level, and we in Europe are most appreciative. People are the major ingredient in force capability; the quality of our troops and their level of training are as high as I have witnessed in my 42 years of commissioned service. The fall 1984 exercises in Europe and the REFORGER exercise earlier this year demonstrated the enthusiasm and high morale of our troops, fostered in part by excellent training, good unit leadership and by the fielding of more capable weapons systems. We must continue to meet their needs so that they will be able to focus on their military responsibilities. This nation expects our service members to serve the interests of their nation before their own; our troops do just that. It behooves us to provide them with appropriate conditions of service.

Readiness

In the area of readiness, we have some deficiencies. There are shortages in POMCUS equipment and facilities and in the numbers of combat service support personnel to support in-place and reinforcing forces. To date only one-half of the total planned POMCUS tonnage has been placed in European storage sites. Congressional approval to continue the shipment of POMCUS equipment and to acquire storage facilities is essential. The POMCUS program was begun a number of years ago in recognition that additional US forces were required to meet the threat anticipated in the early days of crisis or conflict in Europe. POMCUS was judged to be more cost effective and more efficient than alternatives requiring additional high cost strategic air and sealift. Thus, the US made the commitment to its Allies to fill 6 division sets of POMCUS in order to provide the rapid reinforcement of Western Europe.

The ability to move reinforcements from the US to Europe and onward to their combat positions is crucial to enhancing conventional deterrence and defense. The programs that the Congress has supported in the past few years (CRAF, stretched C-141, KC-10, C-5B, C-17, and fast sealift), when implemented fully and in conjunction with complete POMCUS fill, will go far toward meeting our reinforcement needs. I solicit continued Congressional support for the unfunded portions of these essential mobility programs.

One of my major concerns is the inadequate combat service support (CSS) structure available to sustain USEUCOM in the early days of a crisis or conflict. A critical constraint on combat effectiveness is the availability of people and facilities to guard, service and repair equipment and to distribute supplies to the combat forces. These are functions of CSS units. Today, the Army's CSS structure is inadequate to support not only the early arriving POMCUS units but also the combat forces currently forward deployed in Europe. Those CSS units presently in theater are generally understrength -- some as much as 70 percent; additionally, in-theater CSS units comprise only 56 percent of those required to support the US combat forces permanently stationed in Europe. In the case of the deploying POMCUS forces, the situation is worse. Much of their CSS is to be provided by CONUS-based reserve component units, many of which are understrength and underequipped. Continued support is needed to enhance the early availability of reserve component (RC) CSS units. Because of the state of equipment fill, many RC units will remain in CONUS awaiting delivery of essential equipment. That equipment must be provided in peacetime. The availability of strategic sea and airlift for these units must be increased.

Our ability to reinforce is also dependent upon the existence of adequate support facilities in Europe to command and control our reinforcing operations. Facilities are required to house the support personnel who must receive US Army units deploying from CONUS and prepare them for onward movement to combat. In peacetime these forward deployed support personnel draft plans to accomplish the reception and onward movement missions, provide interface and joint planning with host nation personnel who will assist in the accomplishment of this mission in wartime and provide the command and control for POMCUS and ammunition storage facilities which support US forces stationed in that part of West Germany. The Reichel building at Rheinberg in West Germany is an example of such a facility needed to ensure that our reinforcements are received and deployed in a timely manner. It is ideally located astride the lines of communication for the Northern Army Group and in the geographic center of POMCUS and other supply and support sites. The US presently leases 35% of the facility at a cost of $640,000 annually. At current exchange rates, the cost to purchase the building would be $11.8 million. The German government has agreed to purchase the land for US use at a cost of $2 million. Without such a facility, our ability to command and control reinforcing operations in the Northern Army Group area of Central Europe is in question and our ability to meet the US pledge of 10 divisions and associated air squadrons forward deployed by M+10 days is in doubt. I solicit the support of Congress to acquire the Reichel building.

Following up on a SECDEF initiative, USEUCOM is actively engaged in securing Wartime Host Nation Support (WHNS) Agreements with our Allies which can make up a substantial portion of the shortfall in US combat service support structure. Our most important achievement to date has been the WHNS agreement with the Federal Republic of Germany which formalizes the German commitment to dedicate German reserve units and civilian resources to provide logistic and other support for US reinforcing forces. We have similar WHNS agreements on a smaller scale with ten other Allied nations which obligate them to provide support to US forces. Congressional funding for the US share of these WHNS agreements remains a cost effective and essential step in enhancing the readiness of US forces committed to NATO.

Sustainability

Let me now turn to the sustainability factor in the equation of operational capability. The levels of sustainment of US forces committed to NATO are generally higher in most areas than those of the other Allies. Further improvements continue to be made. However, there are some shortages in selected munitions such as air-to-air missiles and certain artillery munitions. Although I have noted considerable improvement over the past five years, the stockage levels of major end items of Army equipment and war reserve kits for the Air Force are too low. Exhaustion of their supply, as well as of the selected munition items, could be termed "war stoppers".

Our ability to sustain combat operations is also influenced by our ability to protect critical assets. The early deployment to Europe of the reinforcing US aircraft can make a substantial contribution to deterrence or to the outcome of a conflict. There are more than 70 Collocated Operating Bases (COBs) which the Allies have made available for use by reinforcing aircraft. Sufficient facilities and aircraft shelters at these COBs would permit these aircraft to maintain combat operations once deployed and enhance their survivability. However, completion of construction of Minimum Essential Facilities (MEF) is necessary before they can sustain combat operations. Funding for MEF and protective shelters is provided by NATO infrastructure funds. Both the MEF and shelter programs are well up in the prioritization of infrastructure projects. Under the current level of infrastructure funding, we anticipate that all MEF will be programmed by 1987 and all shelters programmed by 1995, with 60% of the latter programmed in the current infrastructure slice group, 1985-90.

With respect to the NATO infrastructure program, I have been aware for some time of Congressional concern about recoupment of US funds used in the past to prefinance projects which qualify for NATO common funding. In fact, last year's MILCON appropriation of the Continuing Resolution restricted my expenditure of appropriated US infrastructure funds in FY85 to 4 dollars for every 1 dollar I recoup. In my opinion that constraint is unwarranted because I believe our record is better than Congress realizes.

In 1980 we in USEUCOM began an aggressive program to manage the recoupment of prefinanced infrastructure funds more effectively. 235 million dollars has been recouped or deobligated since 1980 out of a total $473 million which was recoupable. The additional $238 million is programmed for recoupment in the slices from 1985 through 1990. Together, these 2 figures total 100% of all Congressional prefinancing in Europe. What may not be understood, however, is that of the remaining $238 million, only $32.5 million has progressed sufficiently far through the process from contracting to NATO programming to be eligible for recoupment at this time. I believe our record of recoupment is adequate to warrant the elimination of the 1985 Congressional restrictions and I request that they be removed.

A final readiness and sustainability area that requires significant improvement and Congressional support is our wartime capability to provide hospitalization and medical evacuation for our wounded. If war were to break out in Europe in the near future, we could not cope with the anticipated casualties. Among the necessary actions are procurement and prepositioning in theater of fleet, contingency, and general hospitals; associated medical treatment assemblages; medical resupply packages; and additional air and surface medical evacuation equipment assets for availability on M-Day. I solicit full funding of the program.

Modernization

Modernization is another essential element of operational capability. Thanks to the Congress modern aircraft, tanks, ships, multiple launch rocket systems, fighting vehicles, communication equipment and other systems are being deployed. I would hope that the budgeted levels would be funded and that the research and development of subsequent generations would continue apace. Today I will limit my discussion in this area to EUCOM's most essential needs.

Forward deployed NATO forces and early reinforcing forces must be able to absorb the initial thrust of a Warsaw Pact attack. To reduce to a manageable ratio the numbers against which we must continue to defend successfully at our defensive positions, we need the ability to delay, disrupt and neutralize the follow-on forces of the Warsaw Pact -- the Operational Maneuver Groups, the second and third echelons, the reserves. Being perceived as being able to hold the lead echelon of a Warsaw Pact attack while successfully attacking the follow-on forces will improve the credibility of our deterrence by creating the "reasonable prospect" of frustrating a Pact's conventional attack. The most important modernization program for USEUCOM in its primary role of supporting Allied Command Europe is to improve our follow-on forces attack (FOFA) capability.

To disrupt the attacker's ability for continuous operations, to break the momentum of his attack and to maintain a successful forward defense, requires (1) surveillance and target acquisition; (2) fusion, command and control; and

(3) attack capabilities beyond those which we have traditionally needed for the more generalized and centralized air interdiction program. Significant improvements in technology are at hand which will correct many of the deficiencies in surveillance, reconnaissance, and target acquisition. The Joint Surveillance and Target Attack Radar System (JSTARS), the Advanced Synthetic Aperture Radar System (ASARS) and the Precision Location Strike System (PLSS) -- once fielded in sufficient numbers -- will provide the surveillance and target acquisition capability. When coupled with TR-1 aircraft, ground stations to receive and display target data and the Joint Tactical Information Distribution System (JTIDS), we will have the means to perform the first of the three elements necessary to support attack of follow-on forces.

The US has provided USEUCOM a test bed for a joint tactical fusion center - limited operational capability, Europe known as JTF-LOCE. With JTF-LOCE, EUCOM will work with other Allies which are developing a fusion system to establish an ACE Battlefield Intelligence Collection and Evaluation System (BICES). Much effort and time is needed to get BICES functioning and tied into the appropriate command and control systems.

To provide the proper mix of cost-and mission-effective direct and indirect attack and standoff weapons systems for the FOFA mission, the US and its Allies need to exploit their current systems to determine if their range, accuracy and lethality can be improved. In the meantime, the Allies collectively should exploit emerging technology -- as appropriate -- for its application to the FOFA mission component.

Another essential modernization requirement for EUCOM is a modern chemical retaliatory capability. With Congressional support, we have done relatively well in improving our capabilities for defense against chemical weapons and in improving our survivability. However, even the best attainable defensive protective gear will seriously degrade the effectiveness of our combat troops by as much as 30 to 50 percent. With its modern chemical capability -- both offensive and defensive -- the Soviets can force our troops into the debilitating protective gear in critical areas of their choosing while their forces can perform unencumbered. That would be a major disadvantage for our forces. We need the modern chemical munitions which will provide a credible retaliatory capability and deter the use of chemical weapons by the Soviets. Then the situation would be as it was in World War II when both sides possessed chemical weapons but neither side used them -- even in extremis -- for fear that the other side would retaliate.

We have a limited chemical capability today but it is inadequate, obsolescent and difficult to store and maintain. In fact, the majority of our worldwide current stockpile is obsolete, stored in bulk containers, or has no usable delivery means available. I solicit your support for the production of binary weapons in the appropriate configuration. We need a modern, usable retaliatory capability if we are to deter the Soviet use of chemical weapons in Europe and if we are to negotiate from a position of strength in trying to achieve our ultimate goal: the elimination of chemical weapons from the face of the earth.

Terrorism continues to pose a serious threat to our forces. Much has been done to increase our capability to defend against this threat, but additional steps must be and are being taken. These include completing physical security upgrades to deter terrorist attacks, enhancing our antiterrorism training capability in Europe, and fully manning guard forces dedicated to the protection of our installations. We have placed a high priority on combatting terrorism and are working closely with our Allies to eliminate this menace, but continued Congressional support is needed.

Finally, modernization of US Special Operations Forces is needed in order to support theater objectives through enhancement of sustainability and by the development of night, adverse weather, infiltration/exfiltration and resupply capabilities. Acquiring reliable, jointly interoperable, secure communications with a low probability of intercept would measurably enhance these joint operational capabilities.

Force Structure

Now I wish to turn to the force structure element of operational capability. Increases in force structure are necessary if we are to support properly the current and programmed weapons systems. Additional national efforts to develop the pretrained individual manpower resources -- particularly in combat skills -- to bring units to wartime strength or to replace battlefield casualties in the early days of combat are essential to the conventional defense of NATO. Initial efforts indicate that the numbers of individual mobilization augmentees can be increased through carefully constructed programs. The means must be found to sustain these efforts and to meet mobilization and attrition requirements.

An area of special concern with respect to USEUCOM force structure is the current European Troop Strength (ETS) ceiling of 326,400 imposed by the Congress. The ETS ceiling is having an adverse impact on US conventional forces in Europe. EUCOM headquarters has devoted considerable time and effort to develop a management system. To date we have eliminated over 10,000 military authorizations in order to meet the ETS ceiling and still allow for essential modernization. We are now faced with sending back to CONUS units which we need, or deferring the deployment to Europe of units which we also need, or both. To continue to meet the ETS ceiling, we must now trade off manpower spaces from required conventional capabilities for spaces for Ground Launched Cruise Missiles (GLCM) to permit their continued deployment. I do not believe that we can afford to continue to meet the ceiling in view of our having to cut combat muscle that is essential for deterrence and defense.

I ask that Congress rescind the European troop strength ceiling in Europe. I believe that we now have the management of all European spaces -- to include those of the "stove-pipe" commands -- under firm control. The case for enhancing conventional defense is compelling. A continued ETS ceiling on conventional defense improvements will impact adversely upon our efforts. The need to continue GLCM deployment is just as compelling. I would hope that Congress and the Administration could find ways to lead the Allies without relying on ETS ceilings, the threat of withdrawal of US forces, lack of support to the infrastructure program or other punitive measures.

CONCLUSION

In conclusion, there are some thoughts I wish to leave with you for your consideration as you deliberate over the Defense Budget.

First, NATO's strategy for the deterrence of war and the defense of our vital interests in Western Europe remains sound. However, there are deficiencies in the military capabilities required to support fully NATO's Flexible Response strategy. Remedies for deficiencies in the strategic and non-strategic nuclear legs of the triad of forces needed to support our strategy are underway. It only remains for us to follow through on those programs.

Second, further improvements in conventional capability are essential and achievable since a Flexible Response strategy for a defensive Alliance does not require that NATO match the Soviet/Warsaw Pact one for one in any area of force comparison. Improvements in the US force contributions to NATO's defense should be guided by the priority tasks I outlined earlier.

Third, European Command needs your support in some key defense programs. They are:

- People programs such as compensation, medical care, O&M and MILCON for training and for support facilities, housing, family care, and real property maintenance.
- The full deployment of GLCM and PII.
- M-Day essential force requirements including POMCUS equipment, storage facilities, support personnel requirements, and forward stationing of CSS units.
- Mobility/reinforcement requirements with special attention to meeting the national commitment for 10 divisions, 88 tactical fighter squadrons and a Marine Amphibious Brigade in Europe after 10 days of mobilization.
- Funding for WHNS to complement US military capability to enhance US/NATO combat power as specified in HNS agreements.
- Sustainment requirements with special attention to storage and stocks of critical munitions and major end items that can be "war stoppers".
- Wartime capability for hospitalization and medical evacuation through procurement and prepositioning in theater of contingency and general hospitals, and associated medical treatment, equipment and supplies.
- The surveillance/reconnaissance/target acquisition systems, the fusion/command and control systems and the weapons systems needed for the effective continued engagement of follow-on forces, with special attention to standardization/interoperability with Allied assets.
- Modern, binary chemical retaliatory capability.
- Combatting terrorism.

- Special Operations Forces capabilities, especially enhanced infiltration/exfiltration and C3 systems.

Fourth, I wish to mention again that the Soviet/Warsaw Pact military growth machine rumbles on, unabated. What NATO must have is a collective force of all the Allies which has a perceived operational capability which will deter that Warsaw Pact strength from being used against NATO. But the cost of such a deterrent will be high; it always has been.

Since the end of the Revolutionary War, our dream in this country of a continuing peace and our wishful thinking that war will never come again have always caused this nation to weaken itself to the point that we have not deterred aggression nor been properly prepared to engage in combat when deterrence failed. We must not let this happen again. But it will unless we continue to improve the strength and readines of our armed forces along with those of our allies. The recent trends in US defense improvements have been significant. Over the last several years, Americans have sacrificed greatly to reduce the imbalance in comparative force capabilities. These efforts are having an impact. Today, the US Armed Forces have the highest quality troops -- by any standard you want to apply -- in their history. They are well-equipped, ably led and well-trained. Their professionalism, intelligence, sense of duty and willingness to sacrifice in the service of our nation are an inspiration to persons fortunate enough to be their leaders. The operational capabilities of the US forces stationed in Europe have improved considerably in recent years. But we cannot afford to reduce our efforts just when good things are beginning to happen. We must continue to devote sufficient resources to defense both to reap the full benefits of the force improvements we have sacrificed as a nation to make, and to retain the high ground we need to encourage our Allies to continue to do more in the collective defense of common values so that no nation will commit aggression against our Western Alliance.

Finally, I can understand and appreciate the need to reduce the budget deficit and the desire of some in the Congress to reduce the defense budget along with reductions in social and public programs. However, as I have suggested on previous occasions, the highest moral imperative for a democratic government would seem to be to provide that most important of all social services, the one which keeps its citizens free, alive and at peace.

I would hope that that particular social service would be viewed as overarching all others as this nation deliberates its national budgets year after year.

REDUCED DEFENSE BUDGET

Senator Stevens. Thank you very much, General.

I did read the statement last evening. It was a full and complete position. We appreciate your taking the time to come here to present it.

General, the staff is getting the figures. After the Senate voted to reduce the funding in the budget to zero real growth, the Department presented to the Armed Services Committee, the Authorization Committee, a reduction—and I know Senator Stennis is on that committee—of some $4 billion that was indicated could be taken without harming our defense modernization program.

One of those was a substantial reduction, I think it was over one-half billion dollars, that dealt with the conversion factor relating to the mark. The Department told the committee they could reduce the allocation to our forces in Europe by that amount because of the conversion factor.

Since then several members have asked me, if that was available for this year for 1986, why isn't it available for 1985?

As a matter of fact, the dollar is less strong now than it was sometime ago. It has been fluctuating back and forth, as I understand it, for well over a year. We had in terms of the 1985 budget no conversion reduction that I recall.

Is there a surplus there in 1985?

General Rogers. I don't know, Mr. Chairman. I would have to get that answer from the Secretary of Defense.

FOREIGN CURRENCY FUND

Senator Stevens. Could you tell us in terms of the allocations to your forces, our budget, those figures for what is the conversion rate?

General Rogers. No, sir. As the Commander in Chief, I am dependent upon the Services to provide the funding for anything that goes on in European Command to include the modernization of forces. I have no authority in that area, Mr. Chairman.

Senator Stevens. We will ask them then.

I am informed that there are some $900 milllion in the foreign currency fund and the indications are, if this reduction is correct, that only $300 million is needed. I am one who does not like to see money sitting in the fund and be cutting F-16's and M-1 tanks from any force in the budget. We want to track that down.

This reduction we are dealing with, I am sure you have heard, is with a zero real growth. Our information from the House is that the House will come in substantially lower than that as far as the final process down where we deal at the appropriations level.

Can you tell us how a zero real growth budget will impact your effort over there? Have you made a study of that?

General Rogers. We have not because we have not yet learned from the Services where they are going to take their share of the allocated cut, Mr. Chairman.

From reviewing some of the cuts that the House Armed Services proposed, there are areas that will cause me considerable difficulty as the SACEUR. I point to just one which is the JSTARS, the joint surveillance target attack reconnaissance system.

We need that very badly. We need it with the suites that are planned for it, the precision locating strike system, the synthetic aperture system, all of those suites, in order to give us an opportunity in real time to reach back further behind an aggressor's forward line of troops so that we can in fact target on a timely basis and strike those follow-on forces that I described.

To me one of the key determinants of improvement of our conventional forces and of our potential success in the perception of the Soviet mind is this ability to attack follow-on forces.

THREE-PERCENT GOAL

Senator Stevens. Could you tell us about the allies' effort to meet the 3-percent goal, how many of them have met the 3-percent goal this year and what is projected for the next year?

General Rogers. Mr. Chairman, there were eight that met the 3-percent goal last year, including the United States. The projection for next year:

One, the United States will not.

Two, I anticipate Canada will.

The Germans will not. The Netherlands may or may not, but they will probably come quite close. Luxembourg will probably meet its 3 percent.

Turkey, Greece, Portugal will and the United Kingdom will for 1 more year. The first three will meet it next year. I believe the United Kingdom will meet it next year, but they have indicated they will not meet it in subsequent years.

Norway will meet the 3 percent next year. Denmark will not. I doubt that Italy will meet the 3 percent.

GOAL REACHED ON BASIS OF OUTLAYS

Senator Stevens. General, we will make the 3 percent on the basis of outlays. I think the NATO figures are based on outlays. Zero real growth is for authorization, our outlays will continue at the rate of an excess of 3 percent.

Our figures prepared by our staff indicate that in 1981 we had 4.7 percent, NATO allies, 2.9. In 1982, we had 7.6; NATO allies had 2.3. In 1983 we had 7.4, the NATO allies had 1.2. The estimate for this year is 4.8 for us and allies 2.7.

But in the 4-year average we have a 6.7 percent and they have a 2.5 percent. These are outlays.

General Rogers. Mr. Chairman, I would have to check our records, but I believe that my indication for 1984 shows that in the final factoring there were eight nations, including the United States, that met the 3 percent.

Senator Stevens. The estimate that this committee used based on a follow-up, really the information provided Senator Stennis several years ago, is 50 percent of the spending bill that is before us for 1986 will be spent in Europe. If that estimate is correct, and we believe it is, as I said in my opening statement, the United States spends more money to defend Europe than all the European nations do.

Do they have the perception of that imbalance that we do?

General **Rogers**. If they don't, Mr. Chairman, they have not been listening to the many people who have called it to their attention. I am sure the answer to that question is yes, sir, they do have.

TOTAL FORCES COMMITTED TO EUROPE

On your 50 percent spent in Europe I would just like to ask the question: Does that include the cost of all the forces in the United States that are committed to Western Europe in time of emergency?

Senator **Stevens**. It is a commitment to Europe, yes, the forces committed to Europe, including pre-positioned equipment, those that are committed to Europe and not available for commitment anywhere else in the world.

General **Rogers**. Not available for anyplace else in the world?

Senator **Stevens**. That was the guideline.

I really can't tell you yet what will be the Senate reaction to the bill in terms of the allocations. We will start probably tomorrow on that and be on it at least a week and maybe longer. It is going to be a difficult problem, I think, if we really contemplate that we don't have the three percent for 1987 and three percent for 1988.

I think with the adjustments that the Department has suggested, we probably could maintain a modernization program with the zero real growth with some real severe restrictions in some areas, but I don't think we can sustain a modernization program, particularly for Europe, if we have two additonal years of zero real growth. Obviously, we couldn't.

Senator Stennis has been at this longer than any of us. We are delighted he is here this morning.

Senator Stennis, do you have some questions?

Senator **Stennis**. I have a few.

NATO RESPONSIBILITIES OF EUROPEAN NATIONS

I am delighted to be here. I have great confidence in General Rogers. I think he has one of the most difficult assignments of all of our military forces.

I have no complaint about the past, but I remember when the facts were presented as to whether we would go into this venture and have a NATO, there was a promise, as I clearly understood, by the nations over there that all the building construction, warehouses, barracks, and all items like that were to be furnished by those countries there on the ground.

There is not time to go into all of that now, but that has long since been abandoned.

Let me say this, though. If we had not had a NATO, if we had not gone in and taken the lead and gone into this alliance and backed it up considerably, all of Western Europe would now be under the domination of the Communists. I am not going to say this is a failure, but it is a terrible cost. It has amounted to a terrible cost.

USE IN NATO OF RESERVE FORCES

Do you have any plans about using the Reserves over there or do you have an appreciable number of Reserve forces that could go to relieve the situation of this enormous cost?

General ROGERS. Fifty percent of the wartime authorized strength of forces for Allied Command Europe, are Reserve forces. Those forces committed by the United States include, in the time phase force deployment schedule, Reserve forces as well. So, there is a plan to use them.

However, Secretary Weinberger has another initiative before his colleagues which is to find ways to get greater numbers of units from mobilizable Reserves within allied countries. They have trained personnel that have served their tour of duty as conscriptees. The personnel are there.

The major problem is equipment. Now considerable effort must be expended yet before we get to the point of whether or not we know we can in fact utilize those additional Reserves. But our studies show obviously that, if we can provide ourselves with additional Reserve units—I am talking now about tactical Reserve units—to counterattack any penetrations, and so on, obviously our conventional strength will be enhanced, it will raise the nuclear threshold, and that is what all of us want.

So, we do plan to use them. They are scheduled to flesh out units currently, but there are still additional Reserves that could be mobilized and that is the initiative that Secretary Weinberger has introduced to his colleagues and we are working on now at SHAPE.

Senator STENNIS. I can't overemphasize the importance of this. I remember General Eisenhower testified, when the question was up about organizing and going into this venture, that he was willing to risk his place in history on the success or failure of this plan.

That very much affected my case. That was before he was President, as I recall. His estimate, as I remember it, of the number that would be required was so low compared to what you have that I am ashamed to give it.

I recall he had in mind a much smaller number than we have now. I think his testimony swung the Congress and I am thankful it did.

I remember the time that a Senator introduced an amendment to the military apropriations bill providing that 50 percent of those troops be brought home how and it had 44 signers on the amendment. The authorization bill was up for consideration. I was handling it on the floor. I thought we were gone that time, sure enough. Forty-four out of 100 had already signed up. It showed the sentiment, but we got out of it some way.

Senator STEVENS. You won by two votes.

Senator STENNIS. Two votes, right. I just bring that up to show that the people have swung in on this thing. The costs were going up. We were not restraining it enough. That thing can happen again.

Do you realize that, General? Do you worry about that at night some?

General ROGERS. Senator Stennis, I happened to be the Army's Chief of Legislative Liaison at the time the Mansfield amendment was haunting the Halls of Congress. I remember it very well and I have not forgotten that lesson since.

Nor have I forgotten what appeared to be a number of Senators last year who were prepared to introduce a similar measure almost identical to that of Senator Mansfield, but then Senator Nunn introduced one which was going to give us additional time in Western Europe to do more.

Yes, sir, I do think of that and it does worry me because, Senator Stennis, I believe, and I could be wrong, obviously, but I believe that the U.S. vital interests are inextricably linked with those of Western Europe. I think our vital interests are there in Western Europe as well and it is not the defense of Western Europe that we are engaged in, but we are engaged in the defense of the West in Europe.

If there is a major withdrawal of forces, I think three things would happen, Senator.

First is that it would be counter to the interest of the United States.

Second, it would unravel the alliance.

Third, it would move the Soviets farther down the road toward the objective they have set for themselves in Western Europe, which is to intimidate and dominate us without having to fire a shot, intimidation in the shadow of their massive conventional military might.

So, I have those three worries in addition to the worry and concern about such an amendment being introduced and being passed.

May I respond very briefly, sir, to who pays for what in Western Europe?

The common funding, the infrastructure fund is to be used for facilities which have to meet certain criteria. Funds for barracks for U.S. forces must be funded by the United States, however, the same is true for other nations' forces that are stationed in Western Europe, not on their own nation's soil.

So, there is a differentiation.

Senator STENNIS. Mr. Chairman, I have some questions on light divisions that I want to submit for the record.

Senator STEVENS. We are pleased to give you as much time as you want, Senator.

Senator STENNIS. There are others here who have questions.

Senator STEVENS. Senator Rudman.

Senator RUDMAN. Thank you, Mr. Chairman.

It is always fascinating to listen to my friend, Senator Stennis. He brings a special sense of history to this committee and it is remarkable the things that my friend from Mississippi has seen and heard. I hope he puts it in writing someday.

In reading your prepared statement, there are two points you made in the past when you have been before the committee.

THEATER NUCLEAR FORCES

First, to quote you, you say, "I have pointed out in the past if ACE were attacked conventionally, NATO political authorities would face fairly quickly the decision to authorize the release of theater nuclear weapons."

On page 4 you state, as you have stated previously, that the Warsaw Pact faces two options if it is attacked, to withdraw or be the first to escalate to the use of nuclear weapons which they do not wish to do this for fear of further escalation to the stragetic exchange, which the Soviets fear.

The question I ask is one concerning the entire commitments of resources that we evidently have been making and will continue to make in conventional forces. I want to pose this question to you.

Looking at history and looking at Europe in particular, it seems unrealistic to me to make an assumption which underlies our essential doctrine in Europe. That assumption which you and your command and political authorities have adopted, is that in the event of Warsaw Pact incursion against Allied Command, Europe, one of two things could happen. Assuming in the first instance it was a successful attack, with their heavy armor superiority and with the doctrines of today so different in terms of mobility than they were in World War II, they made substantial incursions. They were driving for, let us assume, Brussels or Paris or one of the low countries, and military commanders would be forced into the position at that point of using tactical nuclear weapons to deny enemy supply lines.

On the other side of that issue, if in fact they launched such an attack, and allied forces for a variety of reasons succeeded with our air/land battle doctrine in not only blunting it, but essentially driving across West Germany and East Germany, then the Soviets would at that point, face the same decision.

You know better than I, General, those decisions are not made in the calm of a hearing room. Both sides possess these tactical nuclear weapons. It is difficult for me to assume either commander would not recommend their use.

That leads to the basic question: Is it not the nuclear deterrent more than the conventional deterrent which is really preserving peace in Western Europe and has for 4 years?

General Rogers. It is today. If we are satisfied with that, fine. That is the position I take with the West European people, Senator. If they are satisfied with the posture we have today, which is as I have described it, that if attacked today, I have no option under the guidance I function from my political authorities except to request the release of nuclear weapons.

My guidance is: SACEUR, before you lose the cohesiveness of your defense; i.e., subject to deep penetration, you must request release of nuclear weapons so that:

One, we the political authorities, can make that decision in a determined fashion, not in panic.

And two, we will have sufficient nuclear assets remaining so that we can in fact respond to nuclear weapons.

That is the situation today.

SOVIET OPTIONS

Now, you quote me as saying the Soviets have two options, to withdraw or to escalate, but there was a third option leading up to that, which was if we can establish for ourselves what we have been seeking for this whole decade, a conventional capacity that has a reasonable prospect of frustrating a Soviet-Warsaw Pact conventional attack without resorting to nuclear weapons, then they would perceive they have two options should they attack:

One, to withdraw.

Or, second, to escalate.

They are uncertain as to whether or not using theater nuclear weapons might escalate to the strategic level. They are as uncertain as we are.

The one thing they do fear, in my opinion, if anything, is the strategic nuclear exchange. It still preys on their mind that they lost 20 million-plus in World War II. They still talk about that. They would lose considerably more in a strategic nuclear attack.

The posture we are in is as I have described it. Now, if we are satisfied with that, fine. If not, as a defensive alliance, we can get to this "reasonable prospect of success" in an affordable manner, in my opinion, but the people have to make the decision.

Up to this time, Senator—if I could just piggyback on this question—we have not yet been able to convince the West European people that there is a threat to their freedom I described down the road, intimidation and coercion, maybe not a threat to their peace.

The Soviets don't want war, they are too smart for that. If we have a war in Western Europe, it will come, in my opinion, only as a spillover from a confrontation of super powers someplace else.

But the Soviets have set their objective to try to cause us to accommodate to their will, to dance to the tune of the Soviet piper, sometime down the road.

We are not at that point yet as a defensive alliance. But as the gap between our capabilities and those of the Soviet-Warsaw Pact continues to widen, even as a defensive alliance we are threatened with their achieving that objective as described.

Senator RUDMAN. Thank you for that answer. It sets forth what the conflict is.

I think one of the ironies of this whole debate is that the choice made by the people of Western Europe evidently is in conflict with the choice to be made by the American people through their elected representatives. But I do not agree with what has happened in the last several weeks.

Nevertheless, it is obvious to any analyst or planner that nuclear defense is a great deal less expensive than conventional defense interms of outlaid dollars. That essentially was the great problem with the theory advanced by former Secretary McNamara and some colleagues a couple of years ago in their alternative NATO defense.

The fact is that we are having difficulty, as you can judge by the questions, in sustaining the kind of conventional forces we have now, let alone giving you that incremental superiority that, obviously, you would need against Soviet forces if your air/land battle doctrine were to work.

Here we are faced with the people in Europe saying one thing and the American people saying, well, if we have to maintain our deterrence in Europe, let us go to nuclear weapons. That is because a theater attack on Brussels, in the eyes of someone in New Hampshire, with a nuclear weapon, to the people in Brussels that is a strategic attack.

That, of course, is the psychological problem between the two. I don't know how you meet it. I will only say this to you.

In my view, having been here about 5 years, but watching what is happening, I sincerely doubt that we will get the kind of support from both Houses of this Congress to build up the kind of conventional forces that your doctrine calls for in order to make that political choice easier.

I happen to think we are going to have to continue to depend on nuclear deterrence, both theater and strategic, to keep the peace in Europe. I am afraid you are going to have to plan that way.

General ROGERS. That will be no change, of course, from what we have had in the past 6 years that I have been there. I do think that it is somewhat transparent in the eyes of the Soviets to be in that posture because I believe there may be doubt in their minds as to whether or not we would in fact resort to the use of nuclear weapons in Western Europe.

I do know also that there is doubt in the minds of some—and the United States must continue to press this point—that the United States will in fact keep Europe under the nuclear umbrella of the United States.

So, when I look at the priorities, as much as we need to improve our conventional forces because it is conventional forces that hold territory against the threat by the other side. Nuclear forces cannot hold territory: they provide a holocaust for both sides.

But looking at priorities, to me the number one priority must continue to keep the deterrent value of our strategic nuclear forces, because that is the ultimate guarantor of our deterrent under a strategy of flexible response.

STRATEGIC DEFENSE INITIATIVE

Senator RUDMAN. Let me ask you the final question. I think I am just about out of time. That is this:

You covered the nuclear umbrella and the people in Western Europe feeling that that umbrella stays and stays firm. There are analysts, both here and in Europe, and political leaders who are very concerned about SDI.

They are concerned about it because, obviously, if this country were to have an SDI system that worked in the next ten years for defense of this country, even though the Europeans to some extent would share in its development, there is great concern because of the kind of weapons that could reach Western Europe as opposed to this country. This would start to take away from America's commitment to the umbrella.

How do you respond to that when people raise that issue to you in Europe?

General ROGERS. It is raised all the time. My response to them is:

One, you, in Western Europe, should not try to determine for the United States what it needs for the defense of its own people when that country, the United States, has in fact dedicated itself to your defense in Western Europe.

That is what it really amounts to, if they say knock off the SDI.

Second, I say to them they should take advantage of the opportunity to participate in the research.

Third, that it may well be, as some have stated—to include Dr. Teller—that the first application of the results of this research may be in Western Europe against the INF ballistic missiles of the Soviet Union rather than the first application being in the United States against Soviet strategic forces.

So, what I say to the Western Europeans is there may be something in it for you, it may come first for you, and then you will have to make the decision in Western Europe whether or not to have that kind of a tactical ballistic missile defense for Western Europe.

But nobody knows yet. This administration, as I read it, has committed itself that, when it reaches the point of deciding that such a system is feasible, it will:

One, consult with the Soviet Union over the ABM Treaty if it decides that this system is both mission effective and cost effective, and, therefore, should be procured and deployed.

Second, consult with its allies before the United States makes the decision to deploy. That is very important.

As a consequence, although the pigeon fluttered very vigorously at the outset with the realization of what the President's speech contained, they have tended to settle down because of those commitments that this administration has made for this country.

Senator RUDMAN. Thank you. My time is up.

I always enjoy listening to you, General Rogers, and your thoughtful answers. We are fortunate to have you where you are. I appreciate what you are doing.

General ROGERS. Thank you.

Senator STEVENS. Senator Proxmire.

Senator PROXMIRE. Thank you, Mr. Chairman.

OPPOSITION TO SDI

General Rogers, following up the SDI situation, that certainly seems to be a big problem for the NATO military political alliance. As we know, Prime Minister Thatcher made a speech in support of SDI research before the Joint Meeting of the Congress.

Shortly after that Sir Geoffrey Howe, the Foreign Minister, issued a statement which I thought was about as negative on Star Wars as you can get, raising all kinds of questions about it and seriously criticizing it. That statement was cleared by Mrs. Thatcher before it was made.

The French have been overtly against it. In fact, they said they wouldn't take any part in the technological work that was offered to them by the Secretary of Defense.

The one firm friend, Chancelor Kohl in Germany, supported it and, as you know, just last week after the support was made clear, he suffered the worst defeat in an election in West Germany that his party ever suffered in this particular area which included about a third of the German population and was in the Ruhr area.

Furthermore, I requested a CRS investigation in February. I received it in February. That investigation showed widespread criticism and skepticism among European defense officials about our Star Wars.

Early this week the New York Times reporter found our allies becoming increasingly worried about it.

So, in your talks with other NATO military officials, what criticism and concern do they specifically express about SDI?

General ROGERS. First, we know that this country is success-oriented.

Senator PROXMIRE. This country is what?

General ROGERS. This country is success-oriented, that it does not undertake this kind of activity without the intent of succeeding.

Anything that has the visibility, such as placing the man on the moon, they believe that it is perhaps a foregone conclusion that this will prove to be both mission and cost effective, feasible and practical.

Therefore, they are concerned that both the United States and the Soviet Union will develop this capability for defense, conventional defense against strategic nuclear weapons, and, as a consequence, the West Europeans will be caught in the middle with the threat of the shorter range, nonstrategic nuclear forces of the Soviet Union. That is a major concern.

Second, the United Kingdom and France would not be particularly happy, I would say, if SDI proved that their retaliatory forces—strategic nuclear forces—were to be made obsolescent by a defensive capability. So, those are key concerns.

With respect to the research, they get unhappy when they read, whether it is right or wrong, that they are only going to be able to research in nonsecret areas. I don't think that is intended. I encourage them to take advantage of the contracts that are being let, and let the capabilities of companies in Western Europe—which might be better than some in this country—be exploited.

They are concerned with technology transfer, whether the technology that has to be obtained and exploited will be released to them. In fact, you have an optical firm in Western Germany that can do the research to support this initiative. It does, in fact, possess the technology for that research.

I go back again, Senator, to the point that companies in allied countries should join in the research. Whether or not they do it at a national level or let it be done by individual firms; I think that will vary by nations. Some nations have said they will not participate—Norway, for instance.

DEFENSE OF NATO COUNTRIES

Senator PROXMIRE. France said they would concentrate on offensive missiles. They think they can penetrate any star war defense that the Soviet Union has.

Let me pursue this a little bit further. The problem that it seems to me is most obvious is that Star Wars may work, you may be right. I have great question that it will and many of our outstanding scientists think it is crazy, but it may work.

If it does, it seems to me it would be a real disaster for NATO in Europe. There is no way it can be made to work with the European countries. It seems to me defense of the European countries, West Germany, France, and England, under those circumstances with a Star Wars defense would be pretty hopeless.

Consider the following: Short-range tactical missiles, low-flying cruise missiles, intermediate range bombers, fighter planes carrying nuclear arms, nuclear artillery shells, troops carrying manpacked nuclear weapons.

NUCLEAR WEAPONS UNAFFECTED BY SDI

As an expert, and you are an expert, on tactical theater nuclear warfare in Europe, give us your assessment of what nuclear weapons would likely slip through the Star Wars shield.

General ROGERS. SDI is being researched for defense against strategic forces. It may well have a spin-off, as I say, in an application for theatre nuclear ballistic missiles.

It will not have an application, unless it is again a spin-off from the research—which could happen—against cruise missiles or aircraft or atomic demolition munitions. It won't have application against those systems; it is not intended to.

So, there could still be aircraft and cruise missiles and artillery shells that could be used without defense against them by SDI unless, as I have discussed with General Abrahamson, unless in the research as they go along they find there is a breakout for air defense which we should exploit.

Senator PROXMIRE. That is possible, but it is hardly likely. We never know what is going to happen. It seems to me it is small comfort to the Europeans to say we will have strategic defense because they are so vulnerable to a tactical defense with short-range nuclear weapons.

In the 40 years since World War II there has been a colossal advance in conventional capability, conventional warfare. Europe was devastated, as you know far better than anybody else in the room, in World War II. It was devastated.

If they have to go through that again with the tremendous acceleration in the capability of conventional weapons plus the tactical nuclear weapons, it seems to me they don't have much of a choice. They would just as soon be wiped out quickly, get the misery over with in a hurry, with a strategic attack than to say we are going to give you the comfort of being able to stop the strategic attack, but you won't be able to stop a tactical nuclear attack or conventional attack.

General ROGERS. That is why our mission is deterrence, Senator, so that we won't have any kind of war.

Allied Command Europe continues to work year after year to make its contribution to deterence so that we don't have any kind of war.

Senator PROXMIRE. That is the point. We have kept peace for 45 years with deterrence without Star Wars.

SDI COMPROMISING DETERRENCE

We know, the Soviet Union knows, that a nuclear war would be suicide. That is the deterrence we are talking about. That is the deterrence we are beginning to lift with the Star Wars defense; isn't that right?

General ROGERS. No, sir.

Senator PROXMIRE. Doesn't it compromise it?

General ROGERS. No, sir, I don't think so.

Senator PROXMIRE. Why not? If it works, why wouldn't it? If the Soviet Union has a credible Star Wars defense, the United States has a credible Star Wars defense, then deterrence is gone as far as nuclear strategic war is concerned; is that right?

General ROGERS. Our overall objective, I think, has to be the elimination of nuclear weapons from the face of the Earth.

If we can develop, a conventional defensive capability in the United States and one can also be developed in the Soviet Union which will defend against a fairly high percent of the other ICBM's, I would think we could start reducing those strategic nuclear retaliatory weapons from the face of the Earth.

We will have to retain a certain number, I suspect, even if we developed an SDI system which we thought was 100 percent perfect.

One point I wish to make is that the position we should take with our allies is don't just arbitrarily dismiss this as something which has nothing for them in Western Europe. We can find out and see if it does.

The commitment has been made by this country that they will be consulted before any deployment is made. In fact, they will continue to be consulted along the way.

There are others of us who have concerns about SDI, but for different reasons. This administration has committed itself that it will not withdraw support from nonstrategic nuclear or strategic nuclear or from conventional forces, but again this administration will not be in Government at the time the decision on SDI deployment has to be made.

My concern happens to be: Will the administration at that time in fact find it necessary to reduce resources for the retaliatory capability which we must keep until SDI is fielded—if it is—and for the non-strategic nuclear force which we must have and the conventional forces which we must improve? That is a concern of mine.

It is down the road and there will be another SACEUR concerned with it at that time.

Senator PROXMIRE. My time is up. I have other questions to follow.

Senator STEVENS. Following our procedure, the next one is Senator Hollings.

Senator HOLLINGS. Thank you. Mr. Chairman.

There is so much that needs to be corrected in the record.

THEORY OF MUTUAL ASSURED DESTRUCTION

With respect to the Mansfield amendment, yes, we were relying on MAD, mutual assured destruction, and for a trip wire we considered 150,000 troops sufficient, not any more needed.

Now the circumstances have changed where the Soviets in that 20-year period have not built up their nuclear and I think we are going along the proper route of trying to strengthen our conventional in order to prevent going nuclear. That is number one.

It is just like last year, General Rogers, as an aside, in order to get a freeze, we had to go to 4 percent real growth. We got a majority of the Democrats and 34 Republican Senators to vote on that in an election year in opposition to the leadership.

This year in January after appraising it, we came down from 4 percent real growth to level funding just with inflation. You will see that going along. I am willing to bet money on that.

We are on target because we have had the Defense Department almost like force feeding a goose over there. We put $140 billion in a 4-year period and money is all over the blooming place. Contracts have gone asunder and there is need to stop, look and listen on the contracting level.

CONVENTIONAL AND TROOP STRENGTH

My interest goes to the conventional and the troop strength. You mentioned in 1979 when we went for the intermediate strategic missile, not the ballistic missile, but the intermediate range missile, at that NATO conference in Lisbon our colleagues in NATO said you just are too soft.

They said he didn't believe in limited nuclear war, but we seemed to be limiting it to Europe. We were accused of having our own treaty for strategic, but nothing for them in Europe in intermediate nuclear weapons and they asked for the Pershing and the cruise missile.

That is one point of history, Senator Stennis, we ought to get over to this committee, to some people who think we are trying to force feed missiles on the Europeans. They asked for them.

Second, with respect to the troops themselves, I know a commander who said that whose unit is not fit or ready has lost his ability to command.

I know you will be strong about the quality of your troops. That you and I are both for the draft, perhaps for different reasons, but, in any event, you allude to it when you talk about the numbers and combat service support structure.

General, there is no question in my mind we need to begin an educational program in this country. We are not going to draft anybody this year or next year, but we look at the delayed entry program, 19 percent in the Army, 14 percent in the Navy. We look at demographics whereby we are getting one out of every 5 between 17 and 21 to volunteer.

By 1992 we have to get every other one. I don't think in 1992 every other one is going to volunteer. So, the American body politic, the American people need to be educated.

We don't have to go back to the selective service call. I happen to believe in the draft because we who enjoy the benefits of freedom should be committed to its defense. In fact, again back to our colleagues in NATO, people talk in percentages and they say: Senator, you folks come over here every time from America hollering about percentages and money, money, money. We are committed. We have the draft and you don't.

I think rather than demonstration of military power, so many MX's, what we need is a demonstration of willpower. The President and the Congress and the people are all committed along that line.

What can you say to elaborate on combat service support and the numbers?

GROWTH IN ACTIVE FORCE STRUCTURE

Earlier in your statement you said some active force structure growth is necessary and then you come down to actually meaning combat service support.

What are the projections and how can you elaborate to help us make the American people more aware that the need is going to be there?

General ROGERS. The combat service support that we need, Senator, does not need a draft in order to fill it. We are about 79,000 troops short of Army Combat service support units, to support the U.S. Army forces that are already foward deployed in Western Europe.

I think, Senator Stennis, my recollection is correct that at the time the Mansfield amendment appeared about to pass was when Senator Nunn introduced his tooth-to-tail amendment, the one to create additional combat forces from the support forces we had in Western Europe. That was the amendment that passed and not Senator Mansfield's.

As a consequence, we created more combat forces, but we created a deficit in our combat service support forces which we have had to live with since. That is certainly much better than the Mansfiled amendment.

The point is, Senator Hollings, that the U.S. Army has set a limit on itself of 781,000 end strength. Within that end strength it is creating additional divisions. It cannot create additional active combat service support units within that end strength.

RESERVE FORCES

Therefore, the combat service support units that we need are found in the Reserve forces. Some of them will be ready on time, some of them will not.

WARTIME HOST NATION SUPPORT

In addition, we are working with allied countries bilaterally on what we call wartime host nation support from them, and there will be some relief given by that wartime host nation support in the combat service support area.

So, we are trying to work both the Reserves within the U.S. Army force structure and working with the nations to reduce the requirement for those types of units.

INDIVIDUAL READY RESERVE

Senator HOLLINGS. In what area would we need the draft?

General ROGERS. In the area that I have been advocating for the last 7 years. That is the area that doesn't get any visibility because what gets visibility is success in enlistments and reenlistments. That is the Individual Ready Reserve pool of the U.S. Army which is supposed to be filled sufficiently so that there are trained soldiers to fill the active Army to wartime strength—our units run about 90 percent in peacetime—to fill the Reserve units to wartime strength and to provide replacement for combat casualties until the draft takes over. (It will require about 100 days from the time a recruit enters the training command until he comes out and we have a steady flow of replacements for casualties among infantrymen, artillery, tankers, medics.)

Now, I was concerned when I was Chief of Staff that I was going to run out fairly quickly of those types of skills that I had to provide Al Haig. I tell you, now that I am on the receiving end, I am no more comfortable than I was when I was Chief of Staff.

I should hasten to add that the Army has tried to do certain things with the help of the Congress, such as provide a bonus of $750 for somebody to enlist in the IRR. The Congress changed the law so that there is an 8-year commitment now when one signs up for the service, rather than 6 years, and that is helpful.

Still the fact remains that we run out of those kinds of skills earlier than I think we should.

RETIREMENT AND PENSION CUTS

Senator HOLLINGS. What about cuts in retirement and pensions? How would that affect you and your command in Europe?

I happen to believe that we are responsible. Dave Stockman says the military pension system is an outrageous scandal.

Actually that is an affirmative action policy that we in the Congress instituted in order to attract the individuals in the voluntary Army. We made the contract with them. Now with the zeal of saving money and balancing budgets, they want to go back on pensions and retirements.

What effect would that have if we cut back those retirements and pensions?

Senator STEVENS. Senator, this will be your last question.

General ROGERS. The effect will be reflected throughout all the Services, in my opinion. The fact is that for those who remain in the Service, retirement is the attraction.

The Air Force has run a poll recently and found that retirement benefits provided the inducement for its troops to reenlist, to stay in the Service. By keeping those skills, it saves considerable money by not having to train a replacement, and it saves in other ways.

The impact of messing over the retirement, in my opinion, will cause the retention of the people we want to keep in the Service to go down. How much I can't predict.

Senator, I have been involved as Deputy Chief of Staff, Personnel for the Army and Chief of Staff and at other times in a number of studies and appearances before various task forces who were looking at retirement and what needed to be done about it. In the final analysis, after looking at all the options, I concluded that those who passed the law giving us the current system exhibited a great amount of wisdom and that what we have today is just about what we need in order to give us what we must have.

Senator HOLLINGS. Thank you, sir.

Senator STEVENS. Senator Kasten.

MOBILIZED FORCES IN EMERGENCY

Senator KASTEN. I think that all of us agree or understand that our forces in Europe would be heavily augmented in a crisis.

I want to follow up on a question of Senator Hollings.

It is my understanding that our goal would be to be able to field a total of 10 Army divisions, 88 Air Force squadrons and 1 Marine amphibious brigade within 10 days of the decision to mobilize.

Are my numbers right?

General ROGERS. That is the commitment we made to Western Europe.

SUPPORT FACILITIES FROM WESTERN EUROPE

Senator KASTEN. Could you discuss what additional improvements are needed or what improvements would be needed in the U.S. materiel prepositioning in these programs to achieve that capability? Do you have that capability?

Also, what improvements are needed in the way of European support facilities or reception facilities?

General ROGERS. The commitment is as you described and to have them in Western Europe by M-plus-10, which is considered to be D-day under this scenario of reinforcement.

We come nowhere near meeting that capability with respect to land forces at the present time. But there is encouragement as one stays long enough in my position to see the number of days it requires to close that force come down, not dramatically, but reducing all the time.

We need to continue the prepositioning of the equipment for the six Army divisions. We need to continue to preposition for the Marine MAB in Norway. We need to expand our prepositioning for combat service support units.

The Air Force needs to expand its prepositioning so that we won't have to use so much airlift at the outset to support its forces.

On strategic lift, we have been improvement over the years. We are nowhere near the 66 million ton-miles per day, which is the objective. We are closer, but we are not near that point.

That is why I encourage the CRAF enhancement program, the C-17, the continual extension of the C-5A—of course, the C-141 stretch program has been completed—and the necessity for fast sealift that can get to Europe without having to come in convoys and be able to move the bulk of the material.

Those are the things that have been in the program, Senator Kasten, and I hope will be supported.

EUROPEAN SUPPORT FACILITIES

Senator KASTEN. What about the European support facilities? Are you satisfied that you are able to have the capability that you need there?

General ROGERS. Not yet, but once again we are making progress in bilateral agreements between the United States and allied nations, in all three regions. Some we have completed and some nations have committed themselves to the kind of support they will give. Others have not yet.

RAPID REINFORCEMENT PLAN

It all ties, Senator Kasten, to the SACEUR Rapid Reinforcement Plan which was adopted a few years ago and which is the umbrella plan to which nations harmonize their own reinforcement plans, Canada, United Kingdom, and the United States.

Once again, every year that goes by we get closer to harmonizing national plans with rapid reinforcement plans and from those plans we determine what nations must provide in the way of reception facilities.

Once again, the system is working. We still have a ways to go.

Senator Stevens. Thank you. Senator Sasser.

Senator Sasser. Thank you very much, Mr. Chairman.

BURDEN SHARING

General Rogers, let me ask you some additional questions, if I may, about burden sharing.

You make the point that we are really defending the West in Europe in addition to defending Western Europe. But I find here in the Congress and I find in my State when I go back home that patience is beginning to wear thin, since our NATO allies are not doing their fair share with regard to burden sharing and this is getting down to the grass roots here in the United States.

Then we look at what is happening in the Middle East, the Persian Gulf. We are getting little or no assistance there from our Western European allies, although Europe is much more vulnerable to an oil cutoff than is the United States.

I think this perception that our allies are not holding their end in the common defense is leading to some changing attitudes in this country. I was just reading the other day and came across a figure which indicated that U.S. military forces cost each man, woman and child in this country well over $800 while our European allies provide only one-third as much per capita.

I am not saying that that $800 goes completely to our NATO commitment because it does not, but it does go to our overall defense budget.

Now, it appears to me that our European allies could be providing more for the common defense. The economy in Europe is strong. They have substantial unemployment, but basically their economy is very strong. The gross national product of all of the European countries collectively is as large or almost as large as ours.

Why don't they do more? Are they not as frightened of the Soviet Union as we are?

General Rogers. May I address first the burden-sharing part to show you where I am coming from, Senator Sasser.

Having spent 6 years there and looking at all the factors that go into the equation, I believe that the West European allies are bearing a fair share of the collective burden. I think there is misunderstanding, misconception in this country which has been nurtured by statements made by persons who really, I believe, fail to understand the facts. Let me mention them as I see them. You may not agree with them.

In the 1970's, the West Europeans will point out to you, they were on a 2-percent real increase per year in defense exenditures while this country was on a real decrease.

EUROPEAN FORCES

Second, if we go to war tomorrow, 90 percent of the land forces and three-quarters of the air and sea forces will be West Europeans.

After 30 days of mobilization, if everything goes the way we would like to have it go, 75 percent of the land forces and 50 percent of the air forces and 30 percent of the naval forces would be theirs, and the battlefield would be their territory.

Their costs, which are hidden, for which credit is not given, include 900 military installations for the United States in Western Europe on real estate provided by the allies for which they get not one dime in tax or revenue.

You say yes, our forces are there to defend them. Our forces are over there to defend our own interests, not just theirs, in my opinion.

Also, when you speak of $800 for each man, woman, and child here in the United States versus a third of that in Western Europe, I can say to you that every dime that is spent in Western Europe for defense in some way makes a contribution to the collective security of Western Europe, of NATO.

I cannot say that for every dime that is spent in this country because of obligations that the United States has in other parts of the world. Thank God it has. Thank God it has accepted responsibilities to defend collective interests wherever they are challenged around the world. But there is a sum there, you see, that is not solely dedicated to the defense of Western Europe in the context that you were talking about.

HIDDEN COSTS IN CONSCRIPTION

I happen to believe, frankly, that conscription has a hidden social cost associated with it for which very little credit is given. When one looks at the amount of money that is spent on defense, I think with somewhere around 42 percent of the budget being associated with personnel costs in this country, that you find that the perception may be a bit skewed because of the lower cost in a number of countries that have conscription.

Why don't the nations do more? Most of the nations in Western Europe have a coalition of minority government, Senator Sasser.

Although when I talk to leaders of those nations and talk about a greater contribution, particularly those nations that are doing less than their economy would support, the answer I get is: If I, the leader of my country, go out and get on the stump for defense, knowing that cuts would have to come in public and social programs, my government would fall.

I have convinced myself that the major challenge we face to get them to do more is to convince the people that there is the threat to their freedom that I described earlier, the objective that the Soviets have set without ever having to fire a shot.

But to convince them, we have to have some evidence. I can't get the evidence from this country as SACEUR that I need to undergird the assessments that I make, to undergird the threat that we postulate to them. And I have tried.

I need intelligence evidence that we can present to the public in Western Europe, such as we present on a sporadic basis to leaders of parliaments and cabinet members upon whom such evidence makes a tremendous impression.

If there were only some way to gather all the people in Western Europe and make a presentation with overhead photography and other photography that shows the offensive character of the Soviet Union and the Warsaw Pact, that shows what it is that is threatening us, that shows what they had 1 year and how different it is 3 years later, I think we might have a chance of convincing them that there is a threat to their freedom. It is not until the voice of the people is heard by the parliamentarians saying that they, the people, are prepared to make additional sacrifices now in other programs for the benefit of security arrangements that those parliaments are going to make a change in the allocation of national resources with a greater amount going to security.

NATO SPENDING IN GERMANY

Senator SASSER. General Rogers, you are a distinguished general officer and you have a difficult job as head of the NATO military forces in NATO In essence, one of the things you have told us today is that at least some of our European allies really lack the political will to make the necessary commitments to substantially increase their spending. I don't understand it.

I am looking here at NATO spending for Germany. In 1982, and you know these figures much better than I do, it was down eight-tenths of 1 percent. In 1983 it was up 1.9 percent. To be fair, it was up 3.2 percent in 1981 and up 2.3 percent in 1980.

But if anybody should know what they are confronting with the Soviet Union, it ought to be Germany. They have seen what has happened in East Germany. They see what is happening in Berlin. It is very difficult for some of us politically to go back home and sell our people—we have political problems just as the leaders in the NATO countries have political problems—it is very difficult for us to sell our people on why we need to continue our defense.

I have some additional questions, Mr. Chairman. My time has run out. I would like to ask the General some more questions in the next round.

General ROGERS. May I respond to the question about Germany?

Senator STEVENS. Yes; you may.

General ROGERS. There is a coalition government in Germany as well. The Germans will not forget the importance of social programs when you cast them in the light of the 1930's.

But just take Germany. It is a country about the size of Oregon; 450,000 troops from six nations, not their own, are stationed on its soil; 5,000 exercises off base by those forces every year—gardens go, crops go, buildings are damaged.

Although it may seem insignificant to many people, it is not just the two-legged fowl that get frightened by the low-flying aircraft that keep zooming across that nation.

I think associated with that are the costs. I don't think we take them into account. I would hope if you were to agree with me that when you consider all the factors in the equation, that they are bearing the fair share of their load.

I would hope that you could make that known to your constituents because what we need to do is to overcome this misconception that we have in this country—sometimes I believe fostered by Members of the Congress. I would ask your support in trying to overcome that misconception.

Senator SASSER. General, you are going to have to do a little more work on me before I can agree with you on that. You may have to convince me.

General ROGERS. There is a lot more on Germany that I didn't include on the share of the burden they bear.

Senator STEVENS. You can submit that for the record.

[The information follows:]

NATO CONTRIBUTIONS BY GERMANY

The Federal Republic of Germany [FRG] makes a major and comprehensive contribution to the common defense. The FRG occupies a key geographic position in Western Europe. Its defense outlays—third highest in NATO—support the largest, strongest and best equipped defense force in NATO Europe.

Aside from these direct contributions to the common defense, however, there are a number of areas in which the FRG makes major, non-quantifiable contributions to the West. Prominent examples include the deployment of Pershing II and GLCM in accordance with NATO's 1979 dual-tack Long Range Intermediate Nuclear Force [LRINF] decision and the recent decision to extend the Federal Republic's draft term (to balance the impact of Germany's declining birth rate on the pool of potential conscripts). Both have obvious political significance.

Other major German defense-related contributions that are not reflected in defense expenditures are: a wide-ranging economic air program, large scale expenditures to preserve Berlin's viability as an outpost of freedom, provision of vast amounts of land for allied military facilities and exercise areas, and, furnishing of accommodations for many of the 400,000 allied troops and their dependents who are stationed in the Federal Republic.

COST OF MAINTAINING TROOPS IN EUROPE VERSUS UNITED STATES

Senator STEVENS. Senator Andrews.

Senator ANDREWS. What is the estimate of the cost to maintain troops in Europe versus maintaining troops in the United States? Isn't it two and a half times?

General ROGERS. I would have to go back and dig up the figures on that.

Senator ANDREWS. It is around that figure.

General ROGERS. I couldn't confirm or deny it.

Senator ANDREWS. Place it at this point in the record so that we have it.

[The information follows:]

U.S./NATO TROOP MAINTENANCE COSTS

Cost factors for O&M in Europe are greater than the cost factors in Continental United States [CONUS] because CONUS based operations are supplemented by military labor to a greater extent than they are in Europe. However, I do not agree that these costs are as great as two and one half times. It is likely that any such estimates contain costs for Europe which should not be related to the maintenance of soldier and end strength. For example, in Europe, Prepositioned Overseas Materiel Configured to Unit Sets [POMCUS] is a cost peculiar to theater defense but must be excluded from theater totals when making comparisons with CONUS. Moreover, because Europe is among the first to get new equipment, we have greater force modernization costs. As with POMCUS, such costs should not be included in any factors related to soldier end strength. A realistic comparison of cost between Europe and CONUS, adjusted for military labor, should show only minor differences.

M-1/M-60 TANK USE

Senator ANDREWS. You and I discussed with Senator Stevens what we had seen when we were in Germany, M-1 tanks parked by the side in the warehouses and it bothered us when we visited with you. You were surprised when we found they were in the warehouse.

As I understand it, they were there because troops training in the United States on the M-1 have to have the M-1 over there when they go over there. That is fine and I guess it is a priority, but it is sort of a low priority as I look at it, particularly after the testimony we had in this subcommittee last year, General.

You were not here, but analysis of the Reforger exercises was given and it focused primarily on the use of the M-1 with the M-60. An analysis given by Senator Stevens, who has been in this business longer probably than all the rest put together, showed that the availability factor of the M-1 was 98 percent of the entire exercise.

We also noted that during the exercise the Army ran seven tanks 28,000 miles. The failure rate was less than the criterion, better than most people expected.

Tying that analysis into a question, with the equipment performing as well as the M-1 does, are these M-1 tanks still being put in those warehouses and M-60's still being with our troops out in the field?

General ROGERS. There is a program that includes replacement of the M-60's and also includes putting in POMCUS the M-1's for those POMCUS units that are equipped with M-1's in the United States. If they are not equipped with M-1's, the M-60A3's are in the POMCUS.

TANK TRAINING

Senator ANDREWS. I understand that. The basic part of military tactics I always thought was that you had your best weapons with the troops deployed in the field.

Does it make much sense to deploy troops that cost you two and a half times as much to provide for out in the front lines in Europe with a second rate tank?

Why not train the units back in the United States on the use of the M-60's, put them in warehouses and have the M-1's out with the troops?

There is a whale of a lot better chance of survivability of the tanks being with the troops than having them bunched side by side in a massive warehouse someplace, hoping someone can fly from the United States and activate them and get them up to the front?

General ROGERS. With the continued support of the Congress, we will have sufficient M-1's to replace the M-60A3's with those forces that are currently deployed in Europe as well as have them available for those who have to come over here because we cannot afford the time for the cross training of the M-60A3 to the M-1.

Senator **Andrews**. Is it true at the present time you are still deploying the older tanks in the field and putting the newer tanks in the warehouse? Isn't that true?

General **Rogers**. In Western Europe?

M-1 STORAGE IN WAREHOUSES

Senator **Andrews**. Yes; in Western Europe at the present time don't you have M-1's in the warehouse while you are still putting our field troops in the position of operating a less satisfactory tank, and they are the ones that will absorb the first blow?

General **Rogers**. What I understood you to say was that we would deploy from the United States the M-60A3 to troops in Europe while we were putting M-1's in the warehouse. We do have M-60A3's deployed with some troops in Europe that will be getting M-1's in the future.

Senator **Andrews**. You have no M-1's in the POMCUS warehouses at the present time?

General **Rogers**. I do have M-1's in POMCUS warehouses.

Senator **Andrews**. That is precisely the question. Why put the better weapons in the warehouse when you have the lesser weapons deployed in the field with the troops that cost us much more to maintain over there than if they were kept back in the United States?

General **Rogers**. My answer is the same as I gave before, which is that with the support of the Congress, we will have adequate M-1's to replace those M-60A3's deployed with the troops presently.

We will also have sufficient M-1's in our POMCUS so that we can fly our forces over there in 2 days and marry them up with the equipment and get them in the field without having to stop and cross train them from the M-60A3 to the M-1.

Senator **Andrews**. I understand that. You are kind of avoiding the question.

General **Rogers**. I am not avoiding the question. It is the only answer I can give because that is the only reason we do it.

Senator **Andrews**. You are still putting in the warehouses the better weapons?

General **Rogers**. That is correct. In the meantime we are also putting the better weapon into those units which now have the M-60A3's.

If a division is scheduled to come to Western Europe and it is manned with M-1's in the United States, it will have M-1's in its POMCUS stocks so that we can pick people and fly them over there.

At the same time the U.S. Army is deploying M-1's to those units currently in Western Europe that are equipped with M-60A3's.

FIRING ABILITY OF NATO TANKS

Senator **Andrews**. You have units currently in the field that are furnished M-60's and from the standpoint of safety of those troops, from the standpoint of initial reaction ability and all the rest, it would seem that it would be better to have them equipped with the best weapon that you have.

In your conversations with the NATO allies, General, do you ever get into a discussion that as we move M-1's into those units, and the helpful part of what you are saying is that all of our units will be equipped over there with M-1's, the M-1 firing ability is triple the firing ability of the M-60.

Do they take into account when they look at the number of troops deployed there, if we equipped them with triple the firing ability, they will be able to get along with fewer troops and still give support.

General ROGERS. I don't know where you get the figure of tripling the fire power between the M-60A3 and the M-1.

Although I am not a tanker and I would like to check that out, I just believe that you might have taken the figures from the M-60 and not from the M-60A3.

Senator ANDREWS. From the justification they gave us, they say the M-1's are worth purchasing because they have roughly three times the fighting power, three times the fighting punch of the tank they are replacing.

All we can go on is the figures that were given. Significantly, however, they are better tanks than the ones they are replacing and if they are indeed and in fact better tanks, do you take into account in our negotiations with the European allies that where we have a thousand troops equipped with the older tanks, 700 troops, 500 troops, 750 troops with the new tanks would give the same amount of deterrent capability? Is that part of the talks?

General ROGERS. You have to look at it from the other side, Senator. You know if we follow that path, then as the Challenger tanks and as the new tanks for the Germans come in, which are better than what they had, the last thing I want to do is one of two things.

One, to have them reduce the number of units that they have equipped with those weapon systems because that is counter to the threat that is growing.

Or, second, to not replace on a one-for-one basis.

One of the difficult problems we have with nations as modern equipment comes in is that they are not replacing on a one-for-one basis and we need to have them replaced on a one-for-one basis if in fact our mission is to deter a threat that continues to grow.

So, I would not wish to be the initiator as SACEUR of that approach.

INCREASED U.S. TROOP STRENGTH IN NATO

Senator ANDREWS. We keep looking at the figures that show us that the percentage of troops or the number of troops from the United States stationed in Europe continues to grow while the number of active duty troops by our allies in NATO drops off slowly but perceptibly.

It is that divergence of curves that bothers us and concerns the committee. Given the fact that we are putting in stronger weapons, you would almost think we could keep a plateau of troops maintained in Europe, given the condition of the problems with our economy.

General ROGERS. The Congress has legislated a ceiling of 326,400 on the troop strength that I am authorized to have in my U.S. role. I say to you in that connection it is causing me some problems as the CINCEUR whose responsibility is to support the SACEUR.

The reason is that we now have the management control, the oversight control, of all forces that are assigned to Western Europe of the United States. There are stove pipe commands—signal commands, logistics commands, intelligence commands—reporting directly back to Washington.

The Joint Chiefs of Staff have now given me the authority for oversight of those as we stay within this 326,400 Now we have accounted for 10,000 spaces by better management, having gotten our authority to work with Services, but I am coming up against a very difficult problem, Senator.

I must decide with the ceiling, whether or not to keep from deploying to Western Europe those units that are earmarked to come to us in peacetime—new units with new capabilities that we need for our conventional forces—or to send home conventional units that I also badly need, or to do both.

In fact, we are doing both. We have failed to deploy, for example, an MC-130 squadron that I hand-wrestled the Air Force for a number of years and then could not bring into Europe because we didn't have units already in Europe to use as a trade off.

What is happening is as I eat the spaces for the ground-launched cruise missiles, nuclear weapons, I am bringing in nuclear weapons and enhancing those nuclear forces and sending conventional forces home.

That to me is moving in the wrong direction. That is why I have requested that the European troop strength ceiling be lifted and the congressional management of forces be at the Service level so that the Joint Chiefs can decide where the forces ought to be used. Otherwise there will have to be some actions taken in the future that I don't think any of us would like.

GENERAL INCREASES IN NATO SUPPORT

Senator STEVENS. General, let me pursue that since the Senator's time has expired.

This committee has got some scares. We recommended holding the M-1 tank production rate to 720. Congress insisted on putting in 840.

We urged that the battleships not be refloated, that the submarines not be ramped up from two to four in annual production.

We urged that the fighter production be held to a rate of sustainable production, but it was increased.

There is a whole list of those things. Now, unfortunately, we see the results that we predicted because we had calculated out the bow wave in terms of the outlay rate and said that neither the Congress nor the public would sustain the rate that was being forced on us.

I think there must be at least 20 to 30 items that we deemed the production rate be maintained at an affordable rate. We were the ones that recommended your troop ceiling, as you know. You and I had a little difference over that. I understand you have your job and I have mine.

This year we have a budget request for a $6 billion increase for forces stationed in Europe between 1985 and 1986 and we have a $7 billion increase in requests for divisions that would be deployed in 10 days in the event there is an emergency. The precise numbers are classified, but we can talk about general numbers.

The impact of the action taken to date is that the budget request that did contain about an $82 billion increase, in my judgment, is going to end up to be about a $2 billion increase that will be not quite the rate of inflationary growth, the way I see the compromise.

Senator Hollings disagrees with that. He says we will end up at 4 percent maintaining a zero real growth.

As I read the House, that is not going to be possible. My problem is this. As we analyze now what your situation is over there, you have 15 administrative headquarters in Europe. As a matter of fact, as we look at the NATO structure, your civilian personnel is increasing. It appears that the civilian increase is offsetting the troop strength limitation.

We now can't give you the $13 billion increase. You talk about having to eat numbers in people. This is dollars now. You request a $13 billion increase, $6 billion of it for direct expenditure in Europe. I can tell you now it is not there.

That was, as I understand it, to finance a requested increase that is in the authorization bill of 1,632 additional personnel to handle rotation. It did not handle the Pershing you just mentioned.

In your statement you requested an increase in personnel to meet those new assignments. My problem right now is whether we can find some way to deal with the assignments that you have in Europe, whether it is possible to consolidate some of your headquarters, whether it is possible to centralize the functions for the administration of each military base.

CONSOLIDATION OF LOCALLY ADMINISTERED FUNCTIONS

I understand every military base in Europe has a locally administered function. I could be corrected in that, but that is my staff's advice, that every military base in Europe has a headquarters function.

We don't know why some of those could not be consolidated. We wonder if there has been any review of your civilian assignments so that we could in fact reduce some of the civilian personnel in order to deal with the problems of maintaining the force structure which you want and we want you to have.

When we visited Europe, we found in one town at one base there were 81 local people employed as language instructors for dependents on that base. I believe that is a good thing, to have dependents learn the local language, but that was a fairly high level.

TROOP BILLETING

We had some other comments. We also had the question about the extent to which we needed the redundant quarters for our troops. The troops that were up on the line had quarters back from the line as well as on the line.

One captain told us that he had spent, I think it was, 9 months away from his family during that period in various trainings by his battalion, his division. He had gone to, I think it was, Spain for gunnery training.

Yet we spend a considerable amount of money to take the family over there to be with him. I know Senator Stennis will have some questions about that in terms of dependents.

We talked to that young captain at length. He told us he had spent almost as much time away from his family, and they were in Europe, as he would have spent away from them if they had been in the United States. He would then have a chance to go home for a little bit longer time.

What I am saying is that some of us who want to give you some support to maintain the force structure believe that the administrative costs and the support costs are the ones that are forcing our decisions now in terms of the budget.

My question really is, knowing now, as I said, and I think you realize, too, you are not going to get the $6 billion increase, how are you going to maintain that force structure without some administrative changes?

General ROGERS. I can answer that question, yes. We have sketched out what we would anticipate from various Services with my component commanders the changes that we are going to have to make in order to stay within the ceiling.

I am not prepared to give you that in open session. I would prefer not to give it to you at all until I find out what the facts are.

We have to do this on a year-to-year basis for the Defense Department. As you know, we had to cut 3,500 from what we needed in order to keep the flow of those units coming in that we have to have or to keep those units that we already have for fiscal year 1986. We will have to do the same thing for 1987 and in the outyears if in fact the ceiling remains.

REASSESSMENTS ON PERSONNEL

Senator STEVENS. I appreciate that you have to have some time to make some reassessments. I understand that the authorization bill is fairly general except for a provision that will authorize you to have a variance of about half or one percent above that ceiling on a temporary basis.

At the end of the year you will have to come back down.

General ROGERS. Our projections show, Senator, under the ceiling a need to identify 7,400 spaces. We have taken a first cut at that, what we would call nominal approach to that, to get to the 7.4. It does cut into some areas which, if in fact we have to go that way, would be rather critical, in my opinion.

Mostly that enhancement is with the Air Force because it includes such things as the ground-launched cruise missile, it includes the TR-1, it includes a number of other unit type augmentations and most of it is targeted for the Air Force.

As I look to make my cuts, I don't think that I can take all of those cuts, by any means, just in the Air Force. So, my three component commanders will sit down and hammer it out with me and the Navy and the Army will have to take some of that cut, if in fact we have the ceiling in the out-years.

CUTS IN PROJECTED GROWTH

Senator STEVENS. We hope to be able to explore that with your people a little bit more when we are in Europe in 2 weeks. You are talking about cuts in projected growth, though, General.

General ROGERS. I am talking about having to find 7,400 spaces either those that we need to come in, those that we have there that I will have to send home, somewhere in the balance between those two.

ADMINISTRATIVE CONSOLIDATION

Senator STEVENS. I would urge you to take a look at some of the administrative consolidation that appears to be possible. We don't have the same role with your bases over there that we have in terms of the rest of the world because of the commitments that have been made to NATO.

We do have and must maintain the financial control that is mandated on us. We had projected having available at least $322 billion for this committee.

It is our judgment now that we have about $292 billion for this committee. If that is correct, and that is the level of expenditures from 1985, a solid freeze which it looks like to us is coming in terms of these negotiations, will mean that there is no growth in any item in this budget.

I think we have to have some guidance as to how we might allocate that money to maintain the NATO strength we need.

I am abusing my time a little bit, but I have one other question I would like to ask.

We have just been told that of the 3 million NATO reservists that are NATO ally reservists there is an indication, I don't know the total number that are undertrained or ill equipped, but over 1 million are not even assigned to units. Yet they are counted in the NATO strength.

Could you tell us, is that true?

I have been told that Lord Carrington is reviewing the conventional defense shortfalls of the NATO allies.

In your statement you say we should not threaten our allies and we try to take your advice, but it does seem to us, as we are trying to maintain our commitment, that there ought to be some way to assure that the Europeans are really meeting their commitment and the 3 million reservists are there.

It would seem to be a lot less expensive to keep them in a reserve ready capability than to get our divisions over there. Yet we are maintaining our 10 divisions. We have not slacked off. We have our reserve capability and you will agree it is up to the best level that it has been in recent years.

As we maintain that reserve capability to get over there in 10 days, we get reports of increasing deterioration in the reserve capability of the NATO allies.

Is that true, General?

General **Rogers**. Senator, 50 percent of the reserves, as I mentioned earlier, will be used to bring the units up to wartime authorized strength throughout the Alliance. It is true 50 percent of the wartime authorized strength will be reserves that we have throughout the Alliance.

There is a pool of reserves that I alluded to earlier, which under Secretary Weinberger's initiative, with his colleagues, we will try to find a way to utilize more of them during the period M-plus-15 to M-plus-30.

NATO CONTRIBUTION TO RESERVE POOL

Senator **Stevens**. General, my problem is the NATO contribution to the reserve pool. Our staff tells us that of the 3 million reserves that are committed by European countries to the Alliance, over 1 million of them are not assigned to any units and even those that are assigned to units are undertrained and not equipped.

We are maintaining our pool, but they are not maintaining their reserve strength. Now, is that correct?

General **Rogers**. That is correct. The United States is the only nation that meets all the standards that we have set in Allied Command Europe for reserve forces. Two other nations come very close.

The other nations do not meet our standards for days of training, for equipment that is necessary, and it results from failure of nations to meet the force goals which have been agreed on for a specific period of years.

Yes, the United States is the only one that meets all the standards that we have for reserve forces and two others come very close.

Senator **Stevens**. Senator Stennis.

Senator **Stennis**. I have some questions for the record.

Senator **Stevens**. Senator Proxmire, do you have any questions?

Senator **Proxmire**. Yes; I will be very brief. I realize Senator D'Amato is here and it is a late hour.

I want to thank you very much, General Rogers, you have been a fine and patient witness.

SOVIET THREAT TO NATO

General, let me ask you a general question about what we are really up against because, as has been pointed out by a number of Senators who asked questions, the Europeans don't seem to be quite as concerned, on the basis of the resources they are putting into the defense effort, as we are.

The Soviet Union has been stumbling around in Afghanistan for 5 years. Afghanistan, as we know, is a relatively primitive country with a feeble technological capacity, small economy, yet the Soviet Union does not seem to be able to make any progress there.

The question is how much of a threat do they pose to the West?

I have a series of questions and I would like you to take your pencil out and make a note of these because some of them you may want to give me for the record.

SUPERIORITY OF NATO FORCES

Comparing NATO on the one hand and Warsaw Pact on the other, the statistics I have indicate the overwhelming superiority of NATO, both in potential capability and in actual military capacity.

NATO GNP, $6.2 trillion; Warsaw Pact, $2.3 trillion, 2½ times the figure for NATO.

Population: NATO, 630 million; Warsaw Pact, 383 million.

Troops, and this includes all reserves, para-military, 1½ million command support troops, and 1.1 million U.S. DOD civilian employees; NATO, 5.3 million; Warsaw Pact, 4.8 million.

Total nuclear weapons: NATO, 31,000; Warsaw Pact, 23,000.

Anti-tank weapons: NATO, 400,000-plus; no information available on Warsaw Pact, but they say they have generally less effective anti-tank weapons.

Tanks: The Warsaw Pact has an enormous advantage, 63,700 to NATO's 29,400.

Combat aircraft: NATO, 11,400; Warsaw Pact, 11,000.

Helicopters: NATO, 12,900; Warsaw Pact, only 4,600.

Diesel attack submarines: NATO, 136; Warsaw Pact has more, 163.

Nuclear attack submarines: NATO, 110; Warsaw Pact, 126.

Finally, major surface war ships, including aircraft carriers, battleships, cruisers, destroyers, frigates, others, a big naval capability: NATO, 481; Warsaw Pact, only 299.

This indicates a consistent and sharp advantage for the NATO. You can see why some people in Europe and some people in this country, perhaps mistaken, think at least we have parity if not superiority and that the notion that the Soviet Union has a big advantage may not be the case.

What is your response?

General ROGERS. With respect to Afghanistan, some of us predicted at the time the Soviets went in that they would find they had their Vietnam just as the United States had its.

Senator PROXMIRE. There is a difference here. Afghanistan is on the border. Vietnam is 6,000 miles away.

General ROGERS. I agree. You know how much stuff we had in Vietnam, Senator, in order to support our forces and how much stuff was left there when we left.

Let me give you my figures with respect to NATO versus the Warsaw Pact.

First let me say that with respect to the potential capability of NATO versus Warsaw Pact, the figures you gave would lead one, and I wouldn't argue with the thrust of them, to say that we ought to be doing better.

A Turkish soldier is paid about 25 cents a day. In the Soviet Union a soldier gets about $7 a month.

What does it cost us in this country and in NATO?

The cost of manpower is at least twice as much, probably much more than that.

I just want to give you my figures which I will vouch for as well as you for yours.

Personnel under arms in Europe, a widening gap. They had 3 million in 1973. They now have 4 million. We had 2.4 million in

Western Europe. We now have 2.6 million. This includes those forces of the United States for which we have prepositioned equipment in Europe, so, the gap has widened from 600,000 to 1.4 million.

Divisions: Again the gap widened from 1973 to 1983. From 162 for them and 85 for us to now 192 to 88.

Main battle tanks: They had 30,000 in 1973 to 46,200 in 1983. We had 12,000 in 1973 and went up to 13,500 in 1983.

Senator STEVENS. You have one figure wrong.

What is the tank strength?

General ROGERS. Soviet tanks, 46,230. We have 13,470. That gap has widened in that 10 years.

Antitank guided systems: Again, the gap has widened from 1973 to 1983. They had 10,000 in 1973, and went to over 35,000 by 1983. We had 3,850 in 1973 and 12,340 in 1983.

Artillery, mortar rocket launchers, over 100 millimeters; the same widening gap in those years from a difference of 12,000 in 1974 to 27,800 in 1983.

Attack helicopters: They didn't have any in 1973. We had 220. They now have 1,175 attack helicopters. We have 560. They have surpassed us. They have some of the heaviest attack helicopters in the world, not only attack helicopters for ground, but attack helicopters for the air.

In aircraft: NATO fighter bombers versus Warsaw Pact interceptors, there wasn't a change in the gap, it still remains 2 to 1 against us.

In their fighter bombers against our interceptors the gap has widened from almost parity in 1973 to about 3 to 1 against us in 1983.

Long-range INF warheads on missiles: 1973, we had none. They had 600. Now they have 1,344 and we have those ground-launched cruise missiles and Pershing IIs that have been deployed and that number I do not wish to give in open session.

So it goes.

Senator, from our perspective the gap continues to widen each year that passes.

With respect to the maritime—I didn't get into that—with respect to the maritime in those areas where we were ahead in 1973, and we are still ahead, the gap has narrowed.

In those areas where we were behind in 1973, and they were ahead, the gap has widened to their advantage.

So, it is a continuing widening gap and the method by which the Soviets can exploit that is the major concern that I have and, in fact, I think is the major menace we face in Western Europe.

Senator PROXMIRE. I understand. Let me simply say that these are on a somewhat different base. I am glad you offered yours and I offered mine. I will try to reconcile them. I hope you will take a look at the figures I have offered. I think I understand why there is a difference.

Senator STEVENS. The committee's cost is $75 a day average for every U.S. soldier in the field.

Senator D'Amato.

PREPARED STATEMENT

Senator D'AMATO. Mr. Chairman, I have a statement that, given the lateness of the hour, I would like to put in the record in its entirely.

I have several other questions I would like to submit for the record.

[The statement follows:]

PREPARED STATEMENT OF HON. ALFONSE D'AMATO, U.S. SENATOR FROM NEW YORK

Mr. Chairman, I am pleased to have General Bernard Rogers here with us today to discuss the status of United States Forces in Europe as part of the overall deterrence effort of the North Atlantic Treaty Organization.

Today we must discuss the funding prioritiesa of NATO needed to fulfill NATO's mission. NATO's deterrent strategy of flexible response is supported by a mix of military forces, including strategic nuclear, nonstrategic nuclear, and conventional. Establishing the funding priority of NATO force requirements for troop levels and equipment is essential.

The members of this committee face difficult choices in reducing or eliminating selected defense programs in order to lessen the Federal deficit. Our constituents remind us daily of the urgency of controlling Government expenditures.

An article in the May 20th issue of Army Times illustrates the current problems unified commands are experiencing in communicating their funding priorities to the military departments. Apparently, some people in the unified commands believe that under the current system, their funding priorities are not being properly recognized by the individual services in relation to their assigned mission requirements.

Mr. Chairman, my questions today relate to this funding priority issue.

Thank you, Mr. Chairman.

PRIORITY TASKS IN NATO

Senator D'AMATO. I have one question, General.

I notice that in your prepared remarks you have indicated the priority tasks which have guided United States and Europe commanders over the past 5 years. You say the first is to take proper care of troops and families.

The second is to do better with the forces assigned.

The third task is to continue modernization of weapon systems.

The fourth task is to add to our force structure.

Is this the order of your funding priorities? If not, what are your funding priorities necessary to fulfill your mission, recognizing the budget constraints?

General ROGERS. These are the priority needs which I provided to the Department of Defense as CINCEUR. I was obviously relating those to what I needed as the Allied Commander, Europe.

The overarching priorities are the people programs and specifically people and the European troop strength relief and continued funding of cruise missiles and Pershing II's. Those I consider overarching.

Then M-Day improvements: improvements of the Northag POMCUS situation; mobility, sea and airlift; enhanced combat service support; host nation support.

My next priority was sustainability: conventional munitions, prepositioned war reserve stocks and medical stocks.

The next priorities were those systems necessary to locate, targets and attack Warsaw Pact follow-on forces.

The next was offensive chemical capability which we need so badly.

Then, finally, special operations forces.

Those were the specific priorities that I provided to the Office of the Secretary of Defense in that order.

Senator D'AMATO. Mr. Chairman, as I said, I have some other questions.

Senator STEVENS. Thank you very much.

Your statement and questions will be submitted.

CONCLUDING REMARKS

General, we want to thank you for coming to be with us. We have had good attendance here, as you can tell, and a great interest in the role you are performing on behalf of our Nation and our alliance in Europe.

We only wish that circumstances were not as they are. They are worse than they seem as we look at these numbers because most people seem to forget we get a 4 percent allowance for inflation if we get zero real growth, but inflation has been running over 6 percent in defense.

Even at the 4 percent, the real growth at zero under the budget calculations, we are still 2 percent behind going in. It is going to be a tough job.

I am pleased that we have our good friend, Senator Stennis, here. I have been with him now for 17 years listening to his guidance. He has been a strong supporter of the military this whole time, as you know. He has taught us a lot.

We are glad you are here, Senator. Thank you.

Senator STENNIS. Thank you very much for what you have said. I came here to learn and I have learned. I am glad to see the General again. He is a fine man.

General ROGERS. Thank you, sir.

SUBMITTED QUESTIONS

Senator STEVENS. The subcommittee has a number of questions which will be submitted for your response. They will be inserted in the record at this point.

[The following questions were not asked at the hearing, but were submitted to the Department for response subsequent to the hearing:]

ADDITIONAL COMMITTEE QUESTIONS

European Troop Strength

Question: Provide for the record by Service the number of combat, direct and indirect support troops for FY 1984 through FY 1986.

Answer: US Forces authorized strength follows:

*ARMY	FY 84	FY 85	FY 86
Combat	102,493	101,223	Not Available
Support	114,456	115,886	
**NAVY			
Direct	8,459 (Incls 5 TAR)	8,581	8,713
Indirect	5,966	6,256	6,399
*AIR FORCE			
Combat	65,226	68,327	69,879***
Support	24,096	24,383	23,418
****MARINES			
Direct	0	0	0
Indirect	1,169	1,169	1,169

Source: Services

* Definitions of Combat & Support based on NUNN Amendment.

** Direct includes no combat but includes strategic, tactical mobility, and auxillary activities plus intelligence and communications.

Indirect includes research and development, geophysical, all support to include Medical, Base Operations, Personnel Training, Central Logistics and Management Headquarters.

*** Adjusted down from President's Budget to comply with European Troop Strength Ceiling.

**** No combat or direct support troops ashore in Europe.

Question: Provide the number of military workyears budgeted for FY 1984 through FY 1986. Also, provide military personnel costs and O&M support budgeted.

Answer:

ARMY	FY 84	FY 85	FY 86
Budgeted Manyears	215,064	217,629	217,068
Personnel Costs	$4.5 Bil	$6.2 Bil*	$6.5 Bil*
O&M	$2.6 Bil	$2.6 Bil	$2.8 Bil

NAVY

Budgeted Manyears	14,420	14,629	14,975
Personnel Costs	$245.9 Mil	$363.4 Mil*	$385.6 Mil*
O&M	$141.1 Mil	$146.7 Mil	$160.9 Mil

AIR FORCE

Budgeted Manyears	89,348	92,710	93,297
Personnel Costs	$1.7 Bil	$2.5 Bil*	$2.6 Bil*
O&M	$948.2 Mil	$922.4 Mil	$921.8 Mil

MARINES

Budgeted Manyears	1,169	1,169	1,169
Personnel Costs	$20 Mil	$29 Mil*	$30.1 Mil*
**O&M			

*Includes pay accrual.

**USMC Europe O&M costs are borne by supported agency.

Administrative Personnel in Europe

Question: What is the FY 1986 required administrative personnel level in Europe? Provide by Service for military and civilian.

Answer: These figures are not derived primarily from FY 1986 program data, but are derived from a standard force structure procedure:

	ARMY	AIR FORCE	NAVY	MARINES
Military	11,939	4,902	824	64
Civilian	1,891	2,666	1,162	0
Total	13,830	7,568	1,986	64

Question: How much is required in O&M funds to support administrative personnel in Europe. Include dependents.

Answer: The required O&M cost to support administrative personnel in Europe is $609.6 Mil.

Question: Provide the personnel requirements and support costs for the GLCM bases for FY 1984 through 1986. Breakout personnel and costs by mission related and administrative functions.

Answer: The NUNN Study was the basis for definition of Combat and Support. Support spaces are those above wing level. Base operations data was not available.

Personnel	FY 1984	FY 1985	FY 1986
Combat	2,547	4,671	6,644
Support	146	164	168
Total	2,693	4,835	6,812

Costs

Combat	$77.2 M	$109.3 M	$171.4 M
Support	$ 4.4 M	$ 4.7 M	$ 5.0 M
Total	$81.6 M	$114.0 M	$176.4 M

Operations and Maintenance

Question: Provide the total O&M support for NATO for FY 1984 through FY 1986, including Command, Control and Communications (C3) and intelligence programs.

Answer: The total O&M support for United States forces in NATO is:

FY 84	FY 85	FY 86
$4,166,086,000	$4,185,472,000	$4,348,710,000

TRAINING

Question: What is the total cost of the Air Force Euro-NATO Joint Jet Pilot Training Program for FY 1984 through FY 1986?

Answer: Actual FY 1984 Euro-NATO Joint Jet Pilot Training Program cost is $81,106,280. Budget estimates for FY 1985 and FY 1986 are $87,413,700 and $93,205,600 respectively. Of these totals the US pays approximately 40 percent -- a percentage based upon the US portion of the student flying hours.

Question: Which NATO countries are involved in this program and do they reimburse the US for training conducted in the States?

Answer: The following NATO countries participate in the Euro-NATO Joint Jet Pilot Program and reimburse the US based upon their percentage of student flying hours flown: Belgium, Canada, Denmark, Federal Republic of Germany, Greece, Italy, Netherlands, Norway, Portugal, Turkey, United Kingdom, and the United States.

Question: Provide the total amount of funds for overseas training exercises by appropriation and services for FY 1984 through FY 1986. Also provide justification for increases from FY 1985 to FY 1986.

Answer: Funding for JCS exercises has two primary sources. The JCS-directed and JCS-coordinated exercise account funds transportation costs associated with the movement of forces and equipment via Military Airlift Command and Military Sealift Command to and from Europe. Additionally, this account funds port handling and inland transportation costs associated with exercise movement. The second source for funding of exercises is the Service support cost accounts. Only transportation costs to and from Europe are attributed to US European Command (USEUCOM). The USEUCOM attributed cost for JCS-directed and JCS-coordinated exercises in FY 84 is $68.29M ($61.256M for airlift, 7.020M for sealift) respectively.

Reasons for the increase from FY 85 to FY 86 are as follows:

1. The exercise program in (d) is maturing. Fy 86 is the first time Army armor units will exercise in [deleted]

2. The exercise program with (d) is growing. Even though actual costs are relatively small, the program cost will have increased substantially from FY 85 to FY 86.

3. In FY 85, the cost of deploying US forces for NATO's annual series of Allied Command Europe (ACE) Mobile Force (AMF) exercises was unusually small because a major exercise in Greece was cancelled and a major field training exercise in Denmark was scaled back to a much smaller command post exercise. The FY 86 AMF exercise returns to its usual size and will include [deleted].

4. NATO command post exercises cost more in even years when there are several regional exercises, as opposed to a single, theater-wide exercise in odd years.

5. Exercises conducted by the USAF tactical fighter wing dedicated to the defense of NATO's Southern Region have been relatively small since 1983, when the wing converted from F-4 to F-16 aircraft. In FY 86, this unit will resume exercising its full wartime commitment.

6. As a result of greater US force commitments to the Northern Region, the major NATO exercise in that area will include a larger US Marine and US Army force than ever before.

7. REFORGER 86 will be larger than REFORGER 85. For a number of years we have been increasing the participation by Army Reserve units. Many of these units do not have equipment prepositioned in Europe, more transportation is required. REFORGER 86 will test the first deployment to Europe of a combat aviation brigade.

Question: Will the budget continue to increase for overseas training exercises?

Answer: The cost for European training exercises is not expected to increase significantly for the foreseeable future. Peacetime exercises are essential and their benefit is enormous.

QUESTION: Provide for the record a breakout by service and appropriation for Europe Deployed Forces as identified in the "United States Expenditures in Support for NATO" report provided to Congress in May 1985.

Provide for the record a breakout by service and appropriation for Early Reinforcements as identified in the "United States Expenditures in Support of NATO" report provided to Congress in May 1985.

Provide for FY 1985 and FY 1986 the amount of retired pay included in the Military Personnel total.

ANSWER: The requested breakout by appropriation is attached. A service breakout is not available.

In reviewing these figures please recognize that any attempt to classify U.S. forces into those that would support a war in Europe and those that would not imposes a misleadingly simple dichotomy. In all likelihood, any conflict with the Warsaw Pact would be a major--perhaps global--war, requiring a full commitment of U.S. and allied resources. Accounting categories that attempt to divide up costs by theater--as required by Public Law 98-525 for DoD's report to Congress--ignore the global nature of such a conflict. Perhaps more important, they erroneously imply that our NATO commitment can be separated from our overall national security interests.

A further caveat is necessary regarding the essence of the relationship between the U.S. and NATO. There is a tendency to speak of our NATO defense of Europe. However, it is essential to remember that the treaty area includes the continental United

States and Canada. Therefore, what the United States spends for the defense and security of U.S. territory as such is just as much "in support of NATO" as are, for example, Dutch expenditures for their forces at home and in the Federal Republic of Germany. In this sense--and leaving aside the technical aspects of NATO "commitments" under the Alliance's defense planning procedures--one may affirm with perfect logic that all U.S. defense expenditures are "in support of NATO."

FISCAL YEAR 1986 BUDGET

Table B-9 : P.L 98-525-Mandated Cost by Appropriation Title and Force Class for FY 85
TOA in Billions of Constant FY 1986 Dollars

	Appropriation Title						
FORCE CLASS	RDT&E	PROCURE	MILCON	O&M	MILPERS	Ret. Pay	TOTAL
(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)

1. Numbers may not add to totals due to rounding
2. Retired Pay is included in Military Personnel after FY 1984
3. Military Family Housing Operations and Stock Funds are included in O&M
4. Military Family Housing Investment is included in MILCON
5. * = Less than $50 million

FISCAL YEAR 1986 BUDGET

Table B-10: P.L. 98-525-Mandated Cost by Appropriation Title and Force Class for FY 86
TOA in Billions of Constant FY 1986 Dollars

	Appropriation Title						
FORCE CLASS	RDT&E	PROCURE	MILCON	O&M	MILPERS	Ret. Pay	TOTAL
(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)

1. Numbers may not add to totals due to rounding
2. Retired Pay is included in Military Personnel after FY 1984
3. Military Family Housing Operations and Stock Funds are included in O&M
4. Military Family Housing Investment is included in MILCON
5. * = Less than $50 million

Wartime Host Nation Support

Question: How much will it cost the Army to fully equip Wartime Host Nation Support (WHNS) units activated in 1983 and 1984, and scheduled for activation in FY 1985? Provide figures for OPA and O&M for each fiscal year.

Answer: Unit activation costs are:

	FY 83	FY 84	FY 85
OMA	$.152M	$.669M	$.731M
OPA	1.751M	15.173M	11.452M

OMA costs only include equipment under $3000 unit cost.

Question: Provide a detailed estimate of the Army's actual FY 1985 and FY 1986 WHNS O&M requirement considering a realistic unit activation schedule.

Answer: The O&M estimate is:

	FY85	FY86
Admin cost/civilian salaries	$210,118	$535,059
Infrastructure O&M	$165,954	$293,862
Minor works	$135,000	0
Equipment costs	$4,775,859	$6,015,079
WHNS related costs at USAREUR (TDY, ADP, etc.)	$32,069	$10,000
TOTAL	$5,319,000	$6,854,000

These figures include the yearly O&M costs of units previously activated.

Question: Provide for FY 1983 through FY 1985 budget authority, actual and planned obligations for OPA and OMA for the Wartime Host Nation Support Programs. Also provide the FY 1986 request for OPA and OMA for these programs.

Answer: As of 6 June 1985, figures are as follows:

US Air Force

	FY1983	FY1984	FY1985
O&M Budget Authority	$.31M	$1.50M	$3.40M
O&M Actual Obligations	.03M	1.49M	3.23M
O&M Planned Additional Obligations	0.00M	0.00M	0.17M
Procurement Budget Authority	$3.21M	$4.40M	$10.95M
Procurement Actual Obligations	0.00M	0.00M	0.00M
Procurement Planned Additional Obligations	3.21M	4.40M	10.95M

US Army

	FY1983	FY1984	FY1985
OMA Budget Authority	$1.2M	$8.1M	$9.3M
OMA Actual Obligations	.1M	.5M	.3M
OMA Planned Additional Obligations	0	0	0
OPA Budget Authority	$5.0M	$24.4M	$17.7M
OPA Actual Obligations	5.0M	0	0
OPA Planned Additional Obligations	5.0M	24.4M	17.7M

Air Force FY1986 request is $15.00M for O&M and $12.70M for Procurement. Army FY 1986 request is $8.8M for OMA and $59.1M for OPA.

Second Echelon Forces

Question: What is NATO's commitment to provide second echelon forces?

Answer: The term "second echelon forces" is only used when referring to the WP attack concept; to mention it in connection with NATO forces is misleading. Therefore, it is assumed the question refers to "reinforcements" to Europe. Reinforcements to Europe are provided by Canada, The Netherlands, Portugal, The United Kingdom, and the United States. [Deleted].

Question: Is the US the only NATO country to agree to provide second echelon forces? If so, what is SACEUR doing to get commitment from our NATO allies to meet second echelon force needs?

Answer: As stated in the previous answer several nations besides the US provide reinforcements to Europe.

NATO Air Base Defense

Question: The House Armed Services Committee is recommending $125 million for NATO Air Base defense. Considering this was not budgeted General Rogers, what is your position on this add-on?

Answer: The current NATO Air Base Defense concept is a key ingredient in survivability of our in-place assets. This concept calls for the US to purchase short range air defense systems that will have the mission of defending US airbases. These systems will be manned and maintained by host nation personnel under the terms of bilateral agreements between the US and the host nation. We currently have such an agreement with the UK and Germany using the RAPIER and ROLAND air defense systems respectively. Given the critical demand for, and the short supply of air defense assets, this concept efficiently strengthens the defense of US airbases in particular and NATO's air defense in general.

Question: It is clear that substantial reductions will be made in defense budget request. Do you feel this unbudgeted item should be funded if other NATO related programs must be cut to accomodate this program?

Answer: I do not agree that, to fund a currently unfunded item related to the defense of Western Europe, an offset must be found from among other items related to the defense of Western Europe. US military policy and strategy provides geostrategic priorities for each of the regions where US interests are to be protected. In large measure, these priorities are a function of the threat and the direct consequences to the US should deterrence fail. The threat in Western Europe, and the direct consequences to the US should deterrence fail, are the highest by a substantial margin. Thus, defense dollars, be they increasing or decreasing, can not be fixed at a constant proportion among the various defense requirements of the US. Instead, we must have the flexibility to meet highest priorities first. NATO Air Base Defense is an important element in the deterrence and defense of Western Europe. If trade-offs must be found for this item, they should come from currently funded items which support lesser priority geostrategic requirements.

NATO Emerging Technologies Initiative

Question: What does this mean for the future application of new conventional technologies for the defence of Europe? - How long will it be delayed? Will this delay necessarily postpone our decisions to put less reliance on nuclear deterrence?

Answer: In response to the first part of the question, we will have to be more selective and do a finer degree of prioritization in the areas of requirements and armaments development and production. Conventional defense improvements will continue to be fielded even if spending stays at the present level. For example, the next five years will see the fielding of the Multiple Launch Rocket System produced by a multi-national US/European consortium in addition to systems like the United Kingdom JP-233 and German MW-1 airfield attack weapon systems, and there are many others which also will apply to the Follow-On ForcesAttack mission. Thus, it is difficult to state precisely how long it will take to achieve an acceptable capability - each new fielded system adds a unique increment of capability which increases our ability to contain a Warsaw Pact attack.

Regarding the second question, it simply means that our efforts to raise the nuclear threshold will move at the rate at which we introduce enhanced conventional weapons. There is no doubt, however, that a slower introduction of improved conventional weapons will result in a slower raising of the nuclear threshold.

I do not believe that we will be putting less reliance on nuclear deterrence as long as NATO maintains its flexible response strategy.

NATO Force Commitment

Question: As SACEUR can you tell the Committee what US forces you would expect to be deployed in or available to defend Western Europe assuming a single front in Western Europe? Specify the number of divisions, naval forces, and air wings. How many forces would you expect to receive to defend Western Europe in a two front war involving Western Europe and Asia? How many in a three-front war involving Western Europe, Asia and Southwest Asia? Assume the current level of forces would be available.

Answer: The security of Western Europe and North America being inextricably linked, I expect that only those reinforcing forces and strategic lift assets needed for the defense of North America would be withheld from the defense of the West in NATO-Europe. The US national commitment to the defense of NATO is for the following forces: [Deleted] The US has no similar commitment to provide specific forces to Southwest Asia (SWA) or Asia. The variables involved in a two or three front war are extensive and highly dependent on the nature and composition of the threat and the sequence of the attack. Any prediction of how forces would be allocated in a two or three front war would be so scenario dependent that it would be misleading. Suffice it to say that a multi-front conflict will create competing demands that must be resolved as the conflict evolves. Geostrategic priorities, based on the individual conflicts' consequences to the US and the nature of the threat are the key elements to be factored in this decision.

US Manpower in Europe

Question: General Rogers, the pending authorization bill would give you the flexibility to increase military end strength by a 1/2 percent to manage military stationing. What assurance can you give the committee that you will not use the waiver to increase US on shore troop strength in Europe to 328,000?

Answer: If the present ceiling remains, passage of this waiver provision would be welcomed since it would clearly recognize the difficult job the Services have in stationing the force while concurrently managing actual personnel assignments, minimizing turbulence, maintaining the right skills balance and taking care of the soldier and his family.

If this waiver is enacted and the theater manpower ceiling is continued at the present FY86 programmed level, as CINCEUR I would still be required to control theater programmed strength and benchmark the Services at a theater target although the amended law, would, in fact, recognize the personnel management realities during actual implementation. I would endorse this initiative since it would give our Service Departments the necessary flexibility to manage personnel while we concurrently continue to seek means to minimize programmed military manpower ashore.

Question: What is the increase of civilian end strength and personnel costs in FY 1986?

Answer: The increase of civilian end strength from FY 85 to FY 86 is 3,769 spaces. Cost data is $101,024,276 based on world-wide average civilian cost factors provided by DoD.

ARMY	INCREASE
Civilian	1,228
Costs	$32.9 Mil
NAVY	
Civilian	35
Costs	$.94 Mil
AIR FORCE	
*Civilian	2,506
Costs	$6[illegible].2 Mil

*Total increase was adjusted up from the President's Budget by 1,780 spaces to cover civilianization of military spaces.

Question: I understand you have changing force structure requirements such as the GLCM development. Considering that there are 15 administrative headquarters in Europe, why can't you consolidate these headquarters to meet your personnel requirements.

Answer: The number of U.S. military headquarters in Europe is under continuing review by the Department of Defense, Joint Chiefs of Staff, HQ USEUCOM, and Services. Our major headquarters are currently functioning with minimum manning; and in most cases are undermanned. However, the term administrative headquarters is misleading. Our headquarters have more than just an administrative function. For example, HQ USEUCOM has peacetime and wartime command, control and administrative functions as well as non-NATO wartime operational functions. Further, our Component Commanders are dual-hatted; in addition to their peacetime planning and training functions they have specific wartime functions under Allied Command Europe. Generally speaking, our component forces' HQ would fall under NATO wartime command. Considering the diversified responsibilities of the major headquarters for which manning must continue, I believe that the structure and deployments are consistent with wartime missions.

Question: Considering the deficit and the inevitable budget reductions, why shouldn't we reduce military and civilian personnel in Europe?

Answer: I believe that such a reduction targeted on Europe would undermine the recent increased commitment of our NATO partners to the Alliance and impact unfavorably upon our national commitment to the NATO strategy of Flexible Response. The fundamental question which must be addressed is the importance of Europe and NATO to the security interests of the United States in the global context.

While pressures for budget and deficit reductions are founded in genuine concerns, I believe it would be a serious mistake to further reduce our current military and supporting civilian workforce commitments to Europe. To do so would jeopardize our programs to maintain readiness and to take care of our personnel; however, most importantly it would send the wrong signals to our Allies and adversaries alike without the benefit of either consultation or negotiation.

Supplementary Force Goals

Question: What measures are being considered regarding supplemental force goals in relation to Southwest-Asia/Out-of-the-Area commitments for the US and NATO Allies?

Answer: In the case of a Southwest Asia contingency, planning is ongoing for the provision of US reserve formations to compensate for the loss of US forces otherwise available for Europe. The corresponding Combat Service/Combat Service Support elements are expected to be covered by European NATO nations

Question: Will these measures lead to increased spending by the US in support of NATO?

Answer: NATO's Supplementary Force Goals related to US out-of-area contingencies are addressed primarily to our Allies, and not to the US. [Deleted].

Question: Considering the Allies cannot even meet a 3 percent growth increase for existing force goals, isn't it unrealistic to expect them to meet these supplemental forces goals?

Answer: As adopted in November 1984, NATO's Supplementary Force Goals call primarily for feasibility studies concerning improvements in the land and air force capabilities in Allied

Command Europe, the area which would be most affected by the loss of US forces. The Major NATO Commanders will take account of the results of those feasibility studies when they develop their Force Proposals for 1987-1992, in that they will have determined the actual improvement measures needed along with their costs. Thus, the Supplementary Force Goals, will become subsumed within NATO's regular Force Goals for 1987-1992.

Question: Can you tell us why the US should contribute even more of a "fair share" to NATO when the US, with the least reliance in Southwest Asia oil, is the only Western power to agree to defend the area?

Answer: As a world power, and as the leader of the Alliance, there are certain responsibilities that our Nation can't escape. The defense and security of the West rests, in large measure, in Western Europe. The calculation of a "fair share" contribution to defense is not sensitive to the many non-quantifiable contributions of all Western nations. For example, our NATO Allies recognize the importance of the US role in Southwest Asia, and have supported adoption of the Supplementary Force Goals. (D). Further, in 1984, when a number of merchant ships reported mining incidents in the Red Sea, all NATO allies with minehunting and minesweeping capabilities volunteered to participate in mineclearing operations.

Question: I understand that a report outlining US requirements for prepositioning military material in the Mediterranean for Southwest Asia commitments is being prepared. Can you discuss this report in terms of material and dollars, and supply the report to the committee?

Answer: That information is not held in theater. The Department of Defense can best provide the response.

Question: I understand that a report outlining US requirements for pre-positioning military material in the Mediterranean for Southwest Asian commitments is being prepared. Can you discuss this report in terms of material and dollars, and supply the report to the committee?

Answer: [Deleted].

Information on what or where the Air Force would like to pre-position is uncertain at this time. We do, however, have an estimate of the total square feet of warehouses or magazines which might be required: 1.8 million square feet. At nominal costs of construction, this square footage translates into $50-60 million in construction if all structures were built at one site. None of this construction is programmed, however. [Deleted].

The whole issue remains as yet a concept in the process of being defined, and we are still discussing its different aspects as described above.

Allied Convention Defense

Question: General Rogers, I am told that of the three million NATO reservists in Europe many are undertrained and ill-equipped for combat. Over one million are not even assigned to specific fighting units. What actions are our allies taking to improve their reserve forces?

Answer: Your question addresses a problem which is currently the subject of a major study in SHAPE as a follow-on project of SACEUR's Long Term Planning Guideline on "NATO's Mobilisable Forces". The national inputs to this study available so far seem to support in general the figures used. Measured against ACE Forces Standards, I would agree with the statement that many reservists are undertrained. However, all reservists required to bring NATO forces in Europe up to war authorized strength (WAS) - which in some nations adds up to a contingent of some 60% of the fighting strength - are generally well trained and equipped. As examples, Germany maintains [deleted] continuously trained reservists which represent - calculated on the population - twice as many reserves as the US can recruit and Norway maintains [deleted] reservists representing (d) of the population. With the exception of the United Kingdom, European armies are conscript armies producing more reservists than needed for achieving war footing and for replacing casualties. This fact made it possible for Germany to provide an additional 90,000 reservists for both logistical support and securing lines of communications for US reinforcements under the Wartime Host Nation Support (WHNS) agreement. Certainly, those reservists planned to replace casualties need not be assigned to specific fighting units. However, figures on reservists reported in the Defense Planning Questionnaire replies by nations could lead one to believe that some untapped manpower is available that could be used for NATO if sufficient funds were available to equip and train them. Since such additional funds are not likely to be made available, they would have to be drawn from existing defense programs. Whether this is acceptable and if so, to what extent, is currently under review.

Question: If these reservists were better utilized wouldn't that lessen the need for increasing US requirements in NATO or at least the follow-on forces requirements?

Answer: Our strategy of flexible response requires a certain number of in-place forces and external reinforcements at an higher state of readiness which cannot be substituted by mobilizable forces at all. Therefore, one should examine whether making more use of mobilisable forces would indeed be a potential course of action in the event of an earlier deployment of US Central Command forces. Recent force proposals require European nations [deleted.]

If feasible, that would require reallocation of tasks from in-place forces to currently uncommitted reserve manpower, para-military forces, security forces, and possibly the use of civilian resources. But that course of action also requires the US to make available to NATO a number of [deleted] [deleted.] A concerted effort of both the US and the European Allies is necessary in order to employ effectively all reserve resources to meet NATO's overall defense requirements.

Question: During the past few years the US has been working aggressively to improve its warfighting capability by investing in spare parts and ammunition. Have our allies kept pace with the US improvements in sustainability.

Answer: NATO nations do not report their status of spare parts. Therefore the following comments are directed at ammunition status. It is extremely difficult to compare the efforts of various nations with regard to any portion of their budgets. The US Secretary of Defense in his annual report to Congress on Allied Burdensharing has stated that the defense efforts of allies are fairly equitable. Additionally, reports on days of supply (DOS) of ammunition do not take into account that when a nation accepts delivery on a new weapons system (as have several allies), their initial DOS is reported as low even though their combat capability is greatly enhanced. In that context, of the 11 reporting nations in the alliance, eight have shown an increase in ammunition sustainability or capability in the last 2 years. Additionally, as a result of the December 1984 NATO Ministerials, most nations have agreed to make substantial efforts to further increase their holdings by 1989.

Question: I understand the NATO International Staff under Lord Carrington is reviewing allied conventional defense shortfalls. What deficiencies have been found to date and what action is this group recommending to eliminate these shortfalls?

Answer: With full participation of the NATO Military Authorities (NMAs), the NATO International Staff identified the following deficiencies in military capabilities:

[Deleted].

Many of the deficiencies referred to above include factors related to sustainability.

Another area of deficiency which has significant impact in many areas of conventional defense is that of NATO's commonly-funded infrastructure.

The assessment for the longer term will depend considerably upon the extent to which the aims of the current initiative may be achieved. Emphasis in the future may be changed by subsequent improvements in capabilities, and in addition, technology will also offer new methods to influence the balance between NATO and the Warsaw Pact.

[Deleted] have also been examined. To the extent possible a plan of action towards the necessary improvements has been analyzed, while recognizing that the process of improvement is still at an early stage.

The Alliance has suffered from the lack of a sufficient basis or framework for coherent long-term planning, including long-term threat postulations and long-term technological forecasts. The Military Committee's Conceptual Military Framework for NATO Defense Long Term Planning and the Major NATO Commanders' supporting documents, recently agreed by the NMAs, will hopefully provide an improved basis for long-term planning.

From the total of 27 recommendations agreed by Ministers the following four are assessed as having the highest and most immediate potential for remedial action:

[Deleted].

Question: General Rogers, in your statement you say that by challenging the Alliance and not threatening to punish it, the US can best get its allies to continue to work toward improving their conventional defense. Considering the shortfalls in sustainability; and the inadequate training, equipping and use of reserves, how can you say challenges have been enough?

Answer: It is in the area of conventional forces that we have the greatest need of improvement. Within this leg of our triad of military capabilities, it is primarily our shortages of trained replacements, repair parts and major end items (tanks and Armored Personnel Carriers), ammunition, and theater war reserve stocks which contribute to lowering the nuclear threshold. In these specific areas of combat sustainability, no nation in the Alliance has met fully its commitments to conventional force improvements.

I do not think it helps us to fill these shortfalls by identifying two separate groups within NATO, such as the US and the "others", and then argue over comparisons of their contributions to the common defense. Such actions tend to be divisive and threaten the cohesion of the Alliance. What we strive to achieve is a unified effort from all NATO nations, with each ~~member~~ meeting its agreed commitments and sharing the risk and burden to assure a defense adequate to deter aggression.

In fact we have made some important progress in improving NATO's conventional capabilities in precisely those areas mentioned in the question above. At their meeting in December 1984, NATO Ministers announced a substantial increase in NATO common infrastructure funding with special emphasis on facilities for US reinforcing tactical aircraft. There was unanimous agreement that sustainability is a problem requiring priority attention. Pledges were made to increase war reserve stocks of ammunition and missiles. Compensatory measures were adopted for possible US out-of-area operations.

The effort to gain additional resources to meet these pledges is also being rewarded. By NATO accounting procedures, in 1984 eight Allied nations in addition to the US met or exceeded the goal of an annual 3% real increase in defense spending established in 1978. For the first time since 1978, Alliance defense spending in 1984 exceeded a 3% real growth over all, and this was accomplished despite very real economic constraints which hinder many of our Allies. In the Spring 1985 Ministerials, NATO reaffirmed the goal of achieving annual real defense increases in the region of 3 percent.

In my view we will make more progress if we continue to set the example in NATO by meeting fully US commitments to NATO and proposing postive ways to improve Alliance shortcomings rather than dividing the Alliance through punitive actions such as troop strength ceilings and threats of troop pullouts.

QUESTIONS SUBMITTED BY SENATOR D'AMATO

[illegible]

Answer: [illegible] through their [illegible] Service budgets [illegible] commanders to submit resource needs to their parent Services for inclusion in the Service Program Objective Memorandum (POM). These needs would then compete, within each Service, with the allocation of resources to remedy my operational deficiencies dependent on the funding level of each Service's budget and the priority each Service chose to assign to US European Command's (USEUCOM) needs.

Now, the SECDEF and CJCS have been working to enhance the voice of the Unified Commanders in this process. This year, for the first time, I must no longer rely exclusively on my component commanders to represent USEUCOM needs to their Services. The Chairman and the JCS have agreed that the CINCs will provide directly to the Secretary of Defense, Deputy Secretary of Defense and CJCS (as well as through the component commanders) their priority needs. I would hope that this new step will allow CINC priority treatment by the Services as they develop their POMs.

Additionally, the CINCs make their views known by personal appearances before the Defense Resources Board prior to final decisions on the Annual Revision to the DOD Five Year Defense Program. As for specified commanders, they too must compete for resources. However, their avenue of doing so has been directly with their parent Service. This may account for the different perspective.

Question: You prepared testimony addresses four priority tasks which have guided US European Command over the past five years.

1st Task: Take proper care of troops and families;
2nd Task: Do better with forces assigned;
3rd Task: Essential modernization of weapon systems;
4th Task: Add to force structure.

Here is my question: Is this the order of your funding priorities? If not what are your funding priorities necessary to fulfill your mission recognizing the budget contraints that are being placed on us?

Answer: The priority tasks cited guide the policy, strategy, and force requirements considerations of the European Command. As such, these priority tasks also serve to guide CINCEUR funding priorities; but they are not rules to be strictly applied in each and every case. Instead, an equitable balance among these priorities must be achieved to ensure that deterrence and warfighting capabilities are maximized. These priorities pertain independent of budgetary trends because they are based on the threat, the level of military capability required to provide a sufficient degree of deterrence, and the magnitude of the consequences should deterrence fail. Should deterrence fail in Western Europe, the direct consequences to the United States are immediate and cataclysmic, including a direct linkage to US strategic nuclear weapons. Hence, the funding priorities for European Command must be less sensitive to budgetary trends than other defense requirements where the direct consequences to the United States are far less.

QUESTIONS SUBMITTED BY SENATOR STENNIS

Allied Contributions to NATO

Question: Since 1977, the United States has strongly encouraged its allies to increase defense expenditures by at least 3% real growth annually. Now it appears that the 1986 US defense budget will not increase in real terms and even could experience a real decline of 2% or 3%. Do you think that this congressional action (taken with the approval of the President) will weaken the US position in NATO?

Answer: Alliance nations look to the US for strong leadership within NATO. Anything which undercuts this leadership role is detrimental to Alliance interests. In the sense that a perceived reduction in the US commitment to defense inhibits setting a clear example for other member nations, a defense budget which brings no growth or a real decrease would not be helpful.

Some important points need to be made about US defense spending before any firm conclusions can be drawn. One year's defense budget is not a trend and trends can be more illustrative than performance in any given year. In each year since 1980, the US has exceeded 3% real growth by a comfortable margin. The US has made real progress in improving the capability of its forces pledged to support NATO. The US commitment to providing a strong national defense is well understood and appreciated among our NATO Allies.

Question: Do you think that our NATO Allies will follow our current example and cut back on their defense spending plans?

Answer: No, and I think history will support my answer.

First, as I have indicated previously, there is widespread recognition among the political leadership in the NATO nations that conventional force improvements must be made. Positive efforts are being taken, commitments have been made and specific improvement programs are underway. Our Allies have sought to fulfill their Alliance commitments as best they can given the very real economic contraints they all face. The economic recovery we have seen in the US has not been as dynamic in Europe -- and yet our Allies have made progress.

Second, during the period 1971-1982, US defense spending actually declined by about 1%. Allied defense spending during that same period increased by over 29% while most of their other public sector expenditures were frozen or cut. The record of US defense spending from year to year is characterized by marked periods of both increase and decrease. Independent of this pattern, the Allies as a whole have historically turned in a steady, positive performance.

CINCEUR Input to Budget Process

QUESTION: According to the press reports, you are reported to have said that there is an imbalance between your responsibilities as a unified operational commander and your influence on budget decision-making in DoD, or do they also apply to Congress?

ANSWER: In response to questions on DoD organization posed in the Conference Report on the 1985 DoD Authorization Act, I noted an imbalance that existed between my responsiblities as a unified commander and my influence on budget decisions. My remarks, provided to the HASC and SASC on 5 March 85, further noted the efforts of the Secretary of Defense and Chairman, JCS to enhance the voice of the unified commanders in these matters. As CINC views on required war-fighting capabilities gain a more equitable influence within the DoD decision-making process, I am satisfied that CINC needs will get adequate visibility in Congress.

Question: You are here testifying before the Defense Appropriations Subcommittee, and that gives you a chance to have some input into our decisions. Do you think there are other ways in which your input might be provided?

Answer: As the efforts of the Secretary of Defense and Chairman, JCS to enhance the voice of the CINCs in the DoD policy, strategy, and force requirements decision process are brought to fruition, Congressional visibility of CINC requirements will be increased. The Title 10 change of last year, making the Chairman the spokesman for CINCs on operational requirements is an example. As the CINCs have a more equitable voice in warfighting requirements, the DoD officials who routinely testify on defense matters will be more sensitive to CINC requirements. On balance, there are measures being implemented now within DoD that will increase the input that CINCs have to Congress.

CHEMICAL RETALIATORY CAPABILITY

Question: In your statement (page 16), you say that an essential modernization requirement is a modern chemical retaliatory capability. You say that you need modern chemical munitions which will prove a credible retaliatory capability and deter the use of chemical weapons by the Soviets. What is the current Soviet chemical capability against your forces, and how will it affect your warfighting capability?

Answer: The current Soviet and Warsaw Pact chemical threat against USEUCOM and allied forces is formidable and continually growing. Warsaw Pact forces can wage chemical warfare (CW) on a large scale. Chemical stockpiles support usage rates of [deleted] [deleted.] The Pact would probably attempt to achieve superiority by early first use with fronts allocated from [deleted] [deleted.] Available systems can deliver high volumes of agent at short and long ranges. Of particular concern are ballistic missiles with ranges up to [deleted.]

Use of such a formidable chemical threat against NATO forces, either in a massive attack or selectively against vital targets in our rear areas, would have a devastating and probably decisive effect on our warfighting capabilities. Illustrating the problem, past exercises indicate aircraft sortie generation rates would be reduced to about (d) of that planned within 24 hours of a persistent agent attack at an airbase by three missiles. Other studies indicate U.S. (and in general, NATO) forces cannot sustain effective operations if faced by concerted chemical attacks.

Our capability to survive chemical attack and continue operations in a chemical environment have improved significantly in the past few years. However, even with vastly improved defensive gear our combat forces will be at an unacceptable disadvantage to Warsaw Pact forces who, by choosing the time and place of chemical employment, can operate essentially unencumbered. NATO forces must be able to retaliate effectively. Only through acquiring a credible retaliatory capability can we deter Soviet use of chemical weapons and provide an adequate response should deterrence fail.

QUESTION: In your statement (page 16), you say that an essential modernization requirement is a modern chemical retaliatory capability. You say that you need modern chemical munitions which will prove a credible retaliatory capability and deter use of chemical weapons by the Soviets. What retaliatory capability do you possess, and do you think that this capability will deter the Soviets from the use of chemical warfare?

ANWSER: Theater chemical munitions are limited to [deleted] [deleted.] Because of their short range and limited quantity [deleted] if used throughout Allied Command Europe), in-theater chemical munitions have little deterrence value unless the Soviets [deleted] [deleted.] Also available for deployment to Europe are chemical munitions stored in CONUS and Johnston Atoll. Although diminutive compared to the WP stockpile, the U.S. worldwide, ready-to-use chemical stockpile of [deleted] might appear to give NATO a credible chemical deterrent. It does not. Unfortunately, only [deleted] [deleted.] Credibility of our current retaliatory capability as a deterrent is most constrained by lack of a survivable, persistent agent, deep-strike delivery system, comparable in capability to WP persistent agent bombs and missiles. Spray tanks currently provide a persistent agent, deep strike capability but because they require low, slow, straight and level delivery, [deleted] [deleted.] Bombs in the current inventory are filled with [deleted.] The BIGEYE binary bomb is designed to fill this operational deficiency in the near term.

Short range systems are also required for a balanced retaliatory capability. Significant quantities of nerve agent projectiles [deleted] are available, most located outside the theater. An active maintenance program has kept these projectiles serviceable since their manufacture in the 1960s, but agent and munition deterioration make serviceability beyond [deleted.] Deployment of CONUS stocks is time consuming, requiring significant airlift assets which will undoubtedly be needed for other priority shipments.

Primarily because it lacks a survivable, deep-strike persistent agent chemical agent delivery system, the current U.S. chemical stockpile is not an effective CW deterrent. Modernized chemical munitions are essential to effective deterrence.

Light Divisions

Question: The Army has plans to convert a number of divisions to the so-called Light Divisions. These would be small divisions of about 10,000 troops which would not have heavy equipment such as tanks and self-propelled vehicles. As the NATO Commander, what is your opinion of this conversion and what roles would you envision for US Army Light Divisions in Europe?

Answer: The significant reduction in size obviously means a reduction in organic combat power. But also eliminated were those specialized units a division needs to sustain itself in combat. Thus, at best the division could only be used to defend in dense forest or in urban areas where it would not be likely to encounter enemy armored forces. Even in restricted terrain, the LID will require support from corps combat support and combat service support units (artillery, anti-tank, aviation, air defense, engineer, supply and transportation battalions). The corps do not yet have sufficient support units to augment the LID. If we contemplate using the LID in any circumstances other than the limited ones described, then the corps will need an even greater augmentation.

Question: Do you have specific war plans to use them?
Answer: [Deleted]

Question: The manpower for these divisions would in fact come from existing Army Support Units. In your statement you say that currently there are not enough support units for Europe. Would you comment on this conversion of Support Units to Light Divisions?

Answer: I am reluctant to support manpower conversions to the Light Division that would further degrade support units for Europe. Any reduction in the availability of Army Support Units scheduled for deployment to Europe would only exacerbate the critical imbalance in Army support to combat ratios already in existance. Any consideration for inclusion of additional reserve components in the support inventory must have an authorized level of organization and sufficient resources to maintain unit readiness to meet deployment requirements.

QUESTIONS SUBMITTED BY SENATOR PROXMIRE

Costs of US Defense in Europe

Question: General, Senator Levin and I have asked Secretary Ikle to declassify a NATO document dealing with the costs of the US defense effort in Europe. If I provide you with the details for the record of this request, would you make a personal effort to work this declassification through NATO command?

Answer: Yes.

Question: About two years ago there were indications that the European Edition of Stars and Stripes was being censored by higher command. I wrote you several letters about this and the problem apparently has been cleared up. Are you personally committed to allowing Stars and Stripes to publish without censorship by higher command?

Answer: Department of Defense policy provides for a free flow of information to our service people, tempered by considerations of national security and threat to life. I am personally committed to continuing that policy in connection with the European Stars & Stripes.

Strategic Defense Initiative

Question: Isn't it true that in the event of a US - Soviet conflict in Europe - even if a star wars shield were erected - central Germany would likely still face nuclear devastation from a wide range of nuclear weapons that would come swarming across the border? This is what German military officials are saying privately.

Answer: First I do not see any US - Soviet conflict occuring in Europe without the involvement of our NATO Allies. Second, the likelihood of a nuclear conflict isolated to Europe, even with the Strategic Defense Initiative, is very remote. Until adequate safeguards are provided to insure against use of all forms of nuclear weapons, the Alliance would undoubtedly maintain an effective deterrent capability to forestall this from happening.

Question: Even if we erect a star wars defense in Europe that has some effectiveness against nuclear weapons in that theater, Europeans point out that they can be destroyed just as easily from conventional rounds. They fear that a star wars defense on both sides might make the possibility of fighting a conventional war both more likely and more acceptable because the risks of unacceptable nuclear destruction of their homelands would be reduced.

Do you agree? Could we inadvertantly return to the era in Europe forty years ago of solely conventional warfare?

Would we be making Europe "safe for conventional war" as one French official has warned?

Answer: No, I do not agree that an effective strategic defense will make the possibility of a conventional war in Europe more likely and acceptable. NATO's strategy is based on deterrence and, to achieve this, we must maintain an effective military capability across the potential spectrum of conflict, including conventional and nuclear.

A strategic defense capability will have a significant impact on the ability of the USSR to achieve its political/military objectives. Not known as risk takers, the Soviet leadership must carefully calculate their advantage prior to initiating hostilities against Western Europe. An effective strategic defense capability would greatly influence this calculus and keep the level of uncertainty high in the minds of the Soviet leadership, thereby enhancing deterrence.

It will, however, be necessary, while the Strategic Defense Initiative (SDI) is pursued, to maintain close consultation with our NATO allies before any deployment decisions are made. While the military utility of defensive systems is recognized, consideration of the strategy and policy implications will be necessary as the program develops and more is known about the technical feasibility and cost-effectiveness of defensive systems.

We must also continue to maintain and modernize both our nuclear deterrent and our conventional capability. The SDI program should not divert us from more urgent priorities such as strategic modernization, MX, B-1, and Trident; and US conventional strength in Europe or our reinforcements for NATO's conventional defense.

Question: It has been generally agreed that the Warsaw Pact countries hold a conventional military advantage in the European Theater and that NATO has long compensated for this with its nuclear weapons. But if star wars renders nuclear weapons impotent and obsolete, as the President envisions it, then wouldn't we be left in Europe with a dangerous conventional force imbalance that favored the Soviets? If we pour hundreds of billions of dollars into star wars, won't we also have to pour billions of dollars more into conventional forces in Europe to compensate for any imbalances star wars might create?

Answer: The requirement to improve the conventional defense of NATO, a requirement agreed to and pursued by both sides of the Atlantic, remains valid whether the Strategic Defense Initiative (SDI) comes to fruition or not. The need to improve the conventional defense capability in Western Europe is a function of the Soviets' enormous improvement in conventional forces (qualitative and quantitative) and the need on our part to avoid facing the requirement to employ nuclear weapons to prevent a conventional defeat. Most importantly, improving conventional defense is a requirement in order to prevent war, not solely to prosecute war. We do not want to be faced with the possibility that the Soviets might conclude that a purely conventional war could be initiated and won cheaply in terms of time and resources expended. Instead, we seek to convince the Soviets that conventional war will be costly, that the conventional defense is sufficient to place the nuclear decision on the Soviets. In this regard, the SDI and improvement of NATO's conventional defenses are complimentary -- both are necessary to improve deterrence and reduce the likelihood of nuclear war.

Relative Quality of WP Troops

Question: We talk about the quality of the European troops and reserves supporting us in NATO. Wouldn't you prefer to have European troops under your command versus being in the situation of a Soviet commander who has European troops that may not fight for him?

Answer: I prefer to remain in my position as CINCEUR/SACEUR rather than be in the position of my Soviet counterpart. This judgement is based on a wide range of factors. The question implies that inferior quality and unreliability of Warsaw Pact Troops under Soviet command are the sole reasons for such a view. This is not the case.

SUBCOMMITTEE RECESS

[Whereupon at 12:15 p.m., Thursday, May 16, the subcommittee was recessed, to reconvene at the call of the Chair.]

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